MARCH 1954

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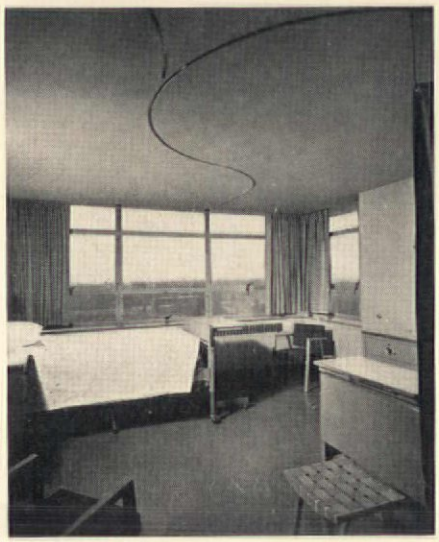

Hedrich-Blessing

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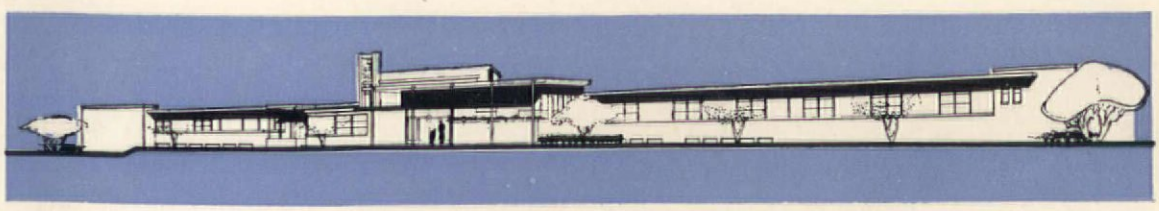
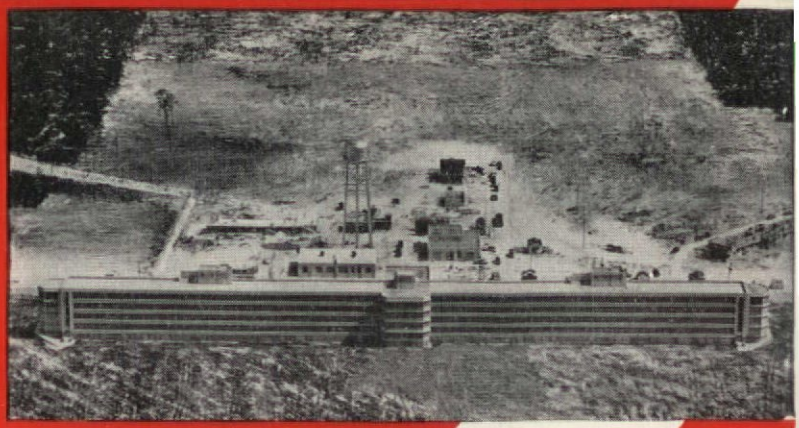
Pres. Dwight D. Eisenhower

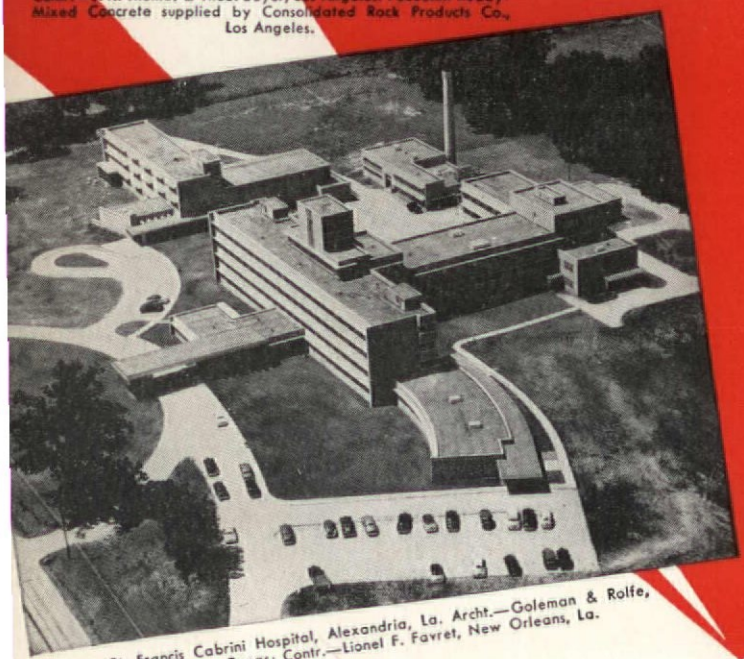
BUILDING TYPES STUDY NUMBER 208 HOSPITALS



St. Francis Hospital, Lynwood, Calif. Archt. — Geo. Adams, Glendale, Calif.; Struc. Engr.—E. C. Hillman, Jr., Los Angeles; Contr.—J. K. Thomas & Theo. Beyer, Los Angeles. Pozzolith Ready-Mixed Concrete supplied by Consolidated Rock Products Co., Los Angeles.



Southeast Fla. State Sanatorium, Lantana, Fla. Archt. & Eng.—Reynolds, Smith & Hills, Jacksonville; Archt. (Assoc.) Chas. K. Kuhn, Jacksonville; Contr.—Arnold Constr. Co., Palm Beach. Pozzolith Ready-Mixed Concrete supplied by Burnup & Sims, W. Palm Beach.



St. Francis Cabrini Hospital, Alexandria, La. Archt.—Goleman & Rolfe, Houston, Texas; Contr.—Lionel F. Favret, New Orleans, La.

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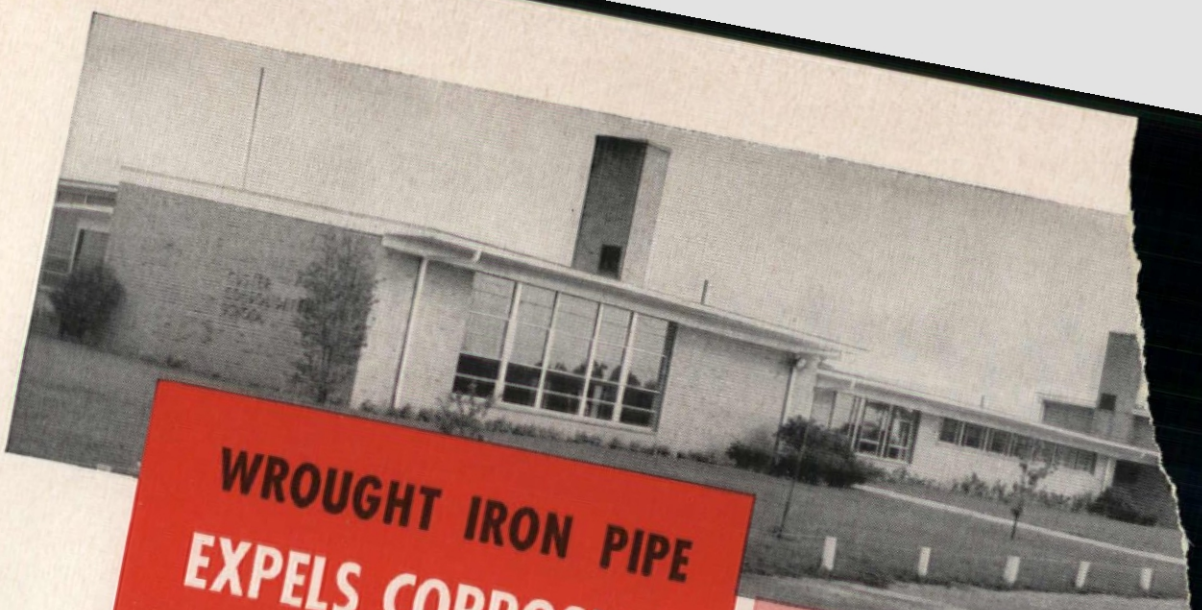

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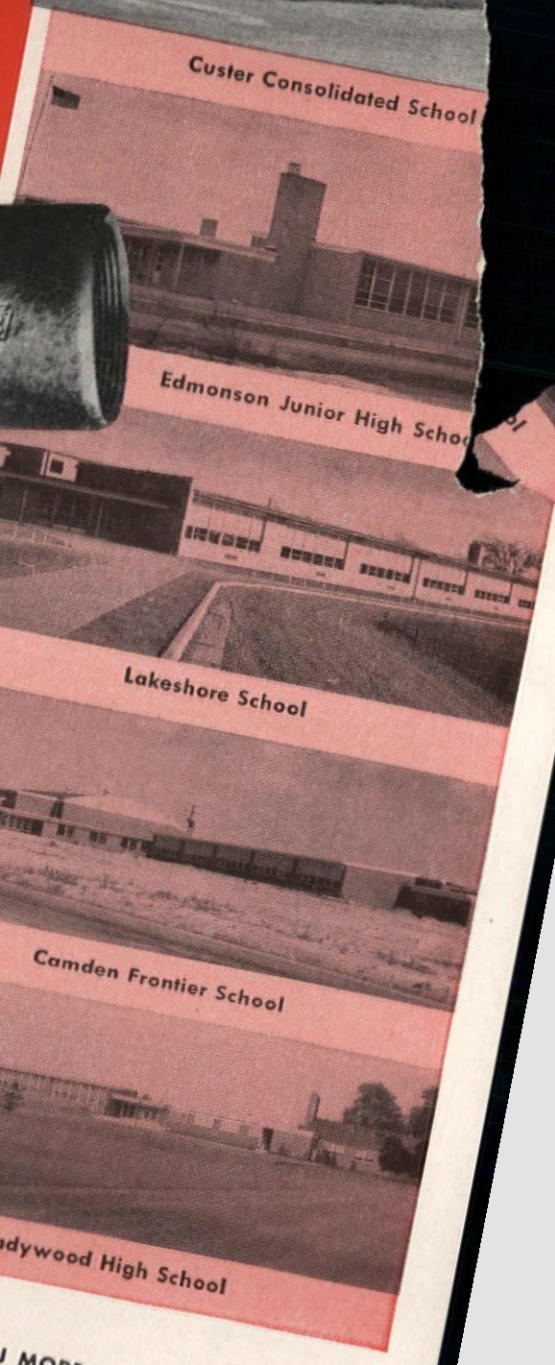

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(Regular Edition)
Entered as second-class matter at the Post Office, Concord, N. H., March 16, 1946, under the Act of March 3, 1879.

ARCHITECTURAL RECORD

March 1954 Vol. 115 No. 3

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ARCHITECTURAL RECORD (combined with AMERICAN ARCHITECT and ARCHITECTURE) is published monthly by F. W. Dodge Corporation, 10 Ferry Street, Concord, New Hampshire, with editorial and executive offices at 119 West 40th Street, New York 18, New York. Western editorial office, 2877 Shasta Road, Berkeley 8, California.

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TABLE OF CONTENTS

The Record Reports

Perspectives 9

News from Canada. *By John Caulfield Smith* 26

News from Washington. *By Ernest Mickel* 38

Construction Cost Index 42

Required Reading 46

Current Trends in Construction 346

If You Were Planning a Cathedral

It sounds like a strange assignment, but after Coventry Cathedral was bombed out during the war, 219 architects entered a competition for the replacement. Here was a battleground in a different war. Basil Spence, the architect whose scheme was premiated, managed a design in contemporary materials and methods with much sympathy for liturgical traditions.

A Contemporary Expression of Cathedral Traditions. *By Basil Spence, O.B., A.R.A., A.R.S.A.* 143

More Autos for Chicago's Loop

Nine Garages for the City of Chicago Make a Frontal Attack on Parking Problem: Friedman, Alschuler and Sincere; Loebl, Schlossman and Bennett; Shaw, Metz and Dolio; Schmidt, Garden and Erikson; Everett F. Quinn and Assoc.; Graham, Anderson, Probst and White; McClurg, Shoemaker and McClurg; Holabird and Root and Burgee; Naess and Murphy, Architects 153

Building Types Study Number 208 — Hospitals and Health Facilities

President Eisenhower suggested a broadening of the Hill-Burton hospital program to embrace several new types of health facilities. But he also asked for extension of the normal hospital building program, and expressed approval of the manner in which the hospital program has been handled. This study shows the latest thinking in planning both the hospitals and the new health program ahead.

Introduction — Federal Hospital Program to Add New Building Types 159

Large Hospital With a Cheerful Look: Louis A. Weiss Memorial Hospital, Chicago, Ill.; Loebl, Schlossman and Bennett, Architects 162

Public Health Center For a Rural Area: Athens-Clarke County Health Center, Athens, Ga., Heery and Heery, Architects 170

Continued on next page

Continued from page 5

Nurses' Home Attracts Vital Personnel: Nurses' Home, Massachusetts General Hospital, Boston, Mass.; Shepley, Bullfinch and Abbott, Architects 172

Laboratory For State Health Department: Hygienic Laboratory Building for West Virginia Department of Health, Charleston, W. Va.; C. E. Silling and Assoc., Architects 174

Medical School and Teaching Hospital: University Medical School and Teaching Hospital, Jackson, Miss.; E. L. Mulvaney, R. W. Naef and N. W. Overstreet, Architects 176

Ninety-Bed Hospital with Exceptional Plan: Memorial Hospital of Sheridan Co., Sheridan, Wyo.; Fisher and Fisher, Architects 184

Hospital for a Town of 5,000 People: Pioneers Memorial Hospital, Rocky Ford, Col.; Charles H. Kellog, Architect 186

Sprawling Hospital for the Wide Open Spaces: D. M. Cogdell Memorial Hospital, Snyder, Tex.; The Butler-Brasher Co., Architects-Engineers 188

Emphasis on Design by Architects

Houses can be designed by anybody, or so most people seem to think. But just try to conceive of a plan-book house plunked down on a very special site. When an architect works on such a problem . . . well, our three houses this month were selected to demonstrate how three architects actually did it.

Introduction 191

The View Shaped This House: Weston, Mass.; Hugh Stubbins, Architect 192

Traditional Neighborhood and Treeless Lot: The Samuel P. Baum Residence, Montgomery, Ala.; Sherlock, Smith and Adams, Architects 197

On a Rock Ledge in the Woods: The Fromkin House, Westport, Conn.; Joseph Salerno, Architect 199

Architectural Engineering

Basic Elements in the Planning of Electrical Systems: Part 2. *By Felix B. Graham* 204

Two Developments in Hospital Equipment and Construction 207

Product Reports 210

Office Literature 212

Time Saver Standards 215

Index to Advertising 348

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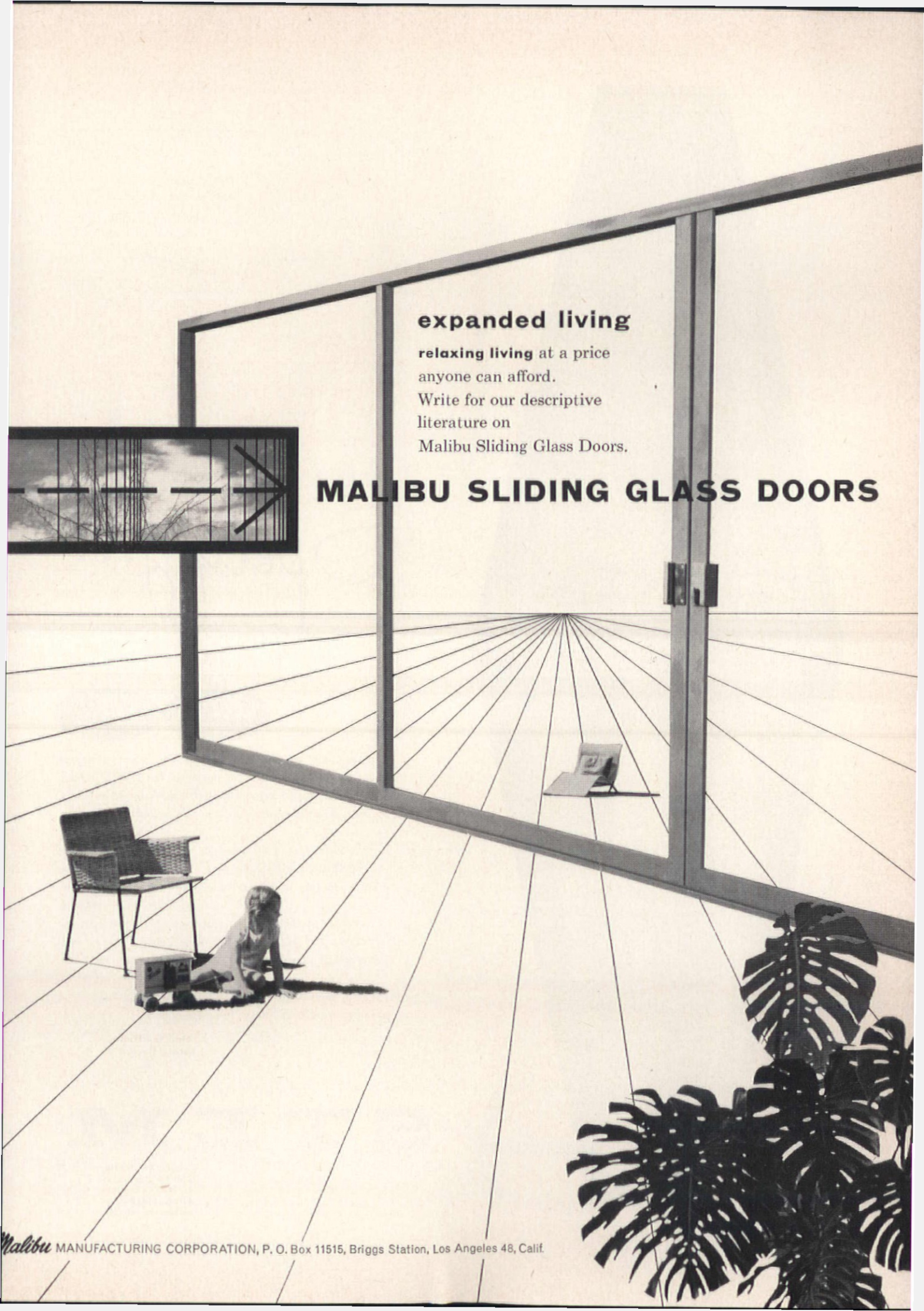
Every effort will be made to return material submitted for possible publication (if accompanied by stamped, addressed envelope), but the editors and the corporation will not be responsible for loss or damage.

Subscription rates in U. S., U. S. Possessions, and Canada: $5.50 for one year, $9.00 for two years, $11.00 for three years. Elsewhere, subscriptions from those who by title are architects or engineers, $6.50 for one year, $11.50 for two years, $15.00 for three years; subscriptions from all others outside U. S., U. S. Possessions and Canada, $20.00 a year. Single copy price, $2.00. Circulation Manager: Marshall T. Ginn. Change of Address: Subscribers are requested to furnish both old and new addresses, sending if possible the stencil impression from magazine wrapper. Allow four weeks for change.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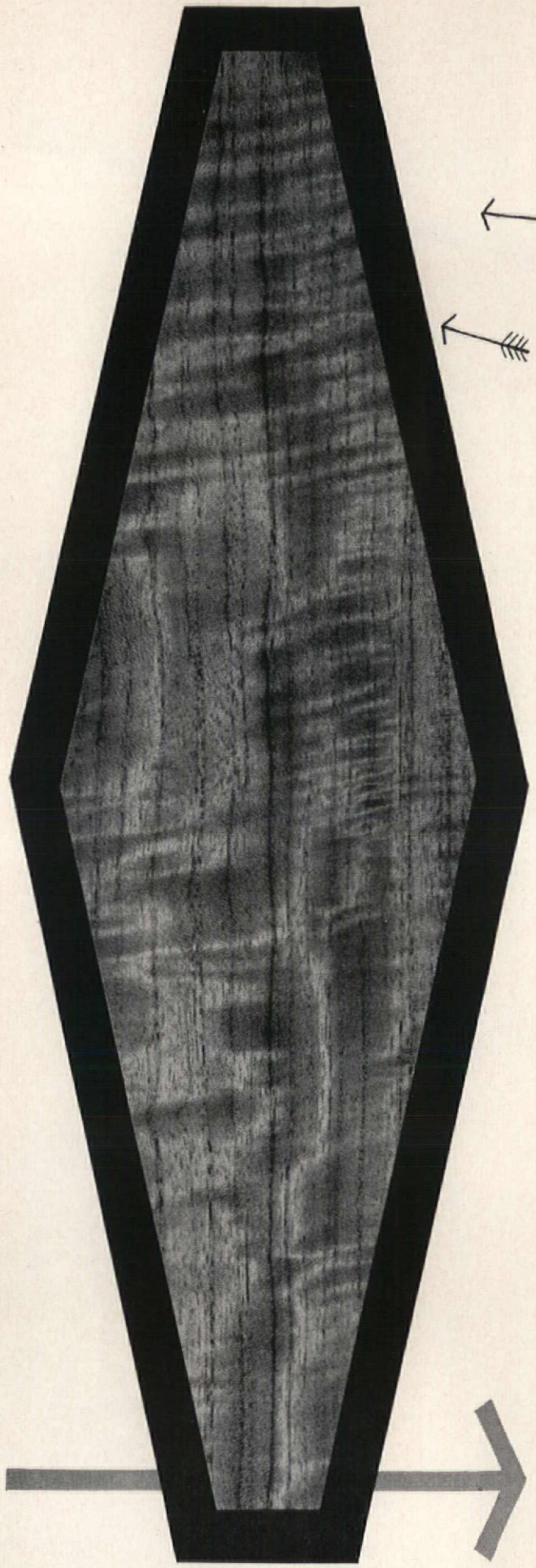

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THE RECORD REPORTS

PERSPECTIVES

INVITATION TO ARCHITECTS? Housing and Home Finance Agency Administrator Albert M. Cole says he is "all for anything that will unfreeze design" of housing. The A.I.A.'s proposal for an industry-wide committee to revise FHA Minimum Property Requirements? — Mr. Cole said he, and, he was sure, FHA Commissioner Guy Hollyday, would welcome any proposals which aimed at freeing design.

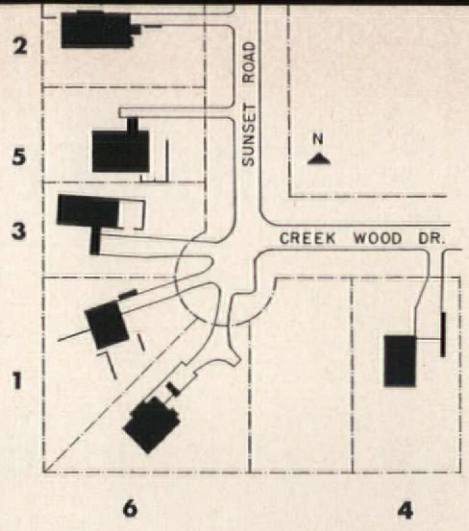
A GREAT RELIGIOUS ARCHITECTURE can only arise out of a great religious faith," says Dr. Harry C. Atkinson of New York, director of the National Council of Churches' Bureau of Church Building. A marriage of architecture and theology rooted in university and seminary training is needed, Dr. Atkinson suggests, to avoid the pitfalls of church design that lacks "spirituality" on the one hand or ignores modern trends on the other. Dr. Atkinson spoke before an Institute on Church Architecture held last month in Philadelphia under the joint sponsorship of the Philadelphia Council of Churches, the Philadelphia Chapter of the American Institute of Architects and his own organization. He called on practicing architects "to enter into the function of the modern church with sympathy"; as for churchmen, they were told: "It is a major task of the churches to encourage our architects . . . to use new materials and new methods, and to apply them to forms of edifices that express honestly the religious faith of our times. Likewise, our church leaders might well lay open their minds to understanding the difficult and challenging problem which confronts the designing architect."

MOTELS NOW OUTNUMBER HOTELS 2 to 1, according to *American Motel Magazine*, which recently completed its second exhaustive survey of the motel industry. Total number of motels recorded: 50,576 — compared with 43,356 when the magazine made its first survey in 1951. The leading motel state, California, has a big edge on Florida in this department — 7330 to 4124 — but Florida does take second place. Other leaders: New York (3305); Texas (3214); Oregon (2405); Colorado (1932); Michigan (1808); Minnesota (1381); Pennsylvania (1374); Washington (1211); Arizona (1192); Missouri (1191); Wisconsin (1106). At the bottom of the list: North Dakota (141); Rhode Island (77); and Delaware (46).

POWER STATIONS OF THE FUTURE — and what else? — may be radically different in design if the implications of the tiny atomic battery which has been developed by the Radio Corporation of America are not misread. The battery converts nuclear energy directly into small but usable amounts of electrical energy — as R.C.A.'s David Sarnoff demonstrated at a New York press conference by hooking the battery to an old-fashioned telegraph key and tapping out a hopeful first message: "Atoms for peace," it began. Until now, said Dr. E. W. Engstrom, executive vice president in charge of the R.C.A. Laboratories Division, "power from the atom has been used in much the same way as coal in the furnace of an electric power plant. All the remainder of the plant remained unchanged — boilers, and an engine or turbine driving a massive electric generator. Only the nature of the fuel was altered when nuclear energy replaced coal or oil. But if the promise of the R.C.A. atomic battery is ultimately fulfilled on a large scale, the power plant of that day would have only an atomic generator." The insistent rattling of the atom was heard also, in the same cold January week, from the small Connecticut town of Groton, where Mrs. Dwight D. Eisenhower christened the *Nautilus*, the world's first atomic-powered submarine. The usual champagne, and the usual words, except for a fateful name.

WONDERS OF CHICAGO: The American Society of Civil Engineers, which has been conducting a nationwide survey to select the "Seven Engineering Wonders of the United States," now has the vote from its Illinois section on the Seven Engineering Wonders of the Chicago metropolitan area (for New York's, see July 1953, page 9). The Chicago "Wonders": (1) Lake Shore Drive and Park Development (1600 acres reclaimed from Lake Michigan); (2) South Chicago and Gary steel mills; (3) Sanitary and Ship Canal (a project which made it possible to reverse the flow of the Chicago River); (4) Bascule Bridges over the Chicago River; (5) the Merchandise Mart; (6) the sewage disposal system (which includes 243 miles of intercepting sewers and three large treatment plants — one the largest of its type in the world); (7) "The First Skyscraper" — William LeBaron Jenney's Home Insurance Building (1885).

William LeBaron Jenney's Home Insurance Company Building, Chicago (1885), chosen by Illinois civil engineers as one of "Seven Engineering Wonders" of Chicago area



THE SITE
Research Village, Barrington Woods, Barrington, Illinois

PLAN CONSTRUCTION OF "RESEARCH VILLAGE" WITH HOUSES BY SIX ARCHITECT-BUILDER TEAMS

THE UNITED STATES GYPSUM COMPANY, a major manufacturer of building materials, has launched a promotion project which focuses on an area that can use a lot of promotion — architect-builder-manufacturer teamwork in the design and construction of low-cost houses.

The project has brought together six architect-builder teams, chosen to represent every section of the country, as the progenitors of six houses — all under 2000 sq ft in floor area and most under 1500 sq ft — each designed by an architect who worked with a builder teammate checking his scheme for construction "practicality" and "sales ideas." The six houses will go under construction early this spring on a wooded site in Barrington, a Chicago suburb; the development, to be known as "Research Village," will get the widest publicity U. S. Gypsum can manage as a laboratory of ideas for low-cost houses.

Primary objectives of the project as set up by the company are:

1. To contribute new design and construction ideas, particularly for the project homebuilder.

2. To create new uses for building materials.

3. To create more livability, comfort, safety and value for the homeowner.

"The idea," the company is careful to say, "was to build six low-cost houses with ideas that could be duplicated — not houses that would be duplicated in their entirety."

Architects were free to use the materials of any manufacturer. In the course of the several planning sessions in Chicago, however, U. S. Gypsum naturally saw to it that all its building materials came under the architects' scrutiny, and now reports — as one early by-product of the project — that it has started several research projects based on product needs the architects suggested.

The six "teams": Harris Armstrong, A.I.A., Kirkwood, Mo. — Don Drummond, Kansas City; Gilbert H. Coddington, A.I.A., Columbus — Alex Simms, Dayton; O'Neil Ford, A.I.A., San Antonio — Frank Robertson, San Antonio; A. Quincey Jones Jr., A.I.A., Los Angeles — Joe Eichler, Palo Alto; Francis D. Lethbridge, A.I.A., Washington — Luria Brothers, Arlington, Va.; Hugh Stubbins Jr., A.I.A., Lexington, Mass. — Leonard Frank, Hempstead, N. Y.

Architects were selected, from the 36 of 40 nominated who expressed interest in participating, by an architectural advisory panel consisting of Morgan Yost, F.A.I.A., Kenilworth, Ill.; John Root, F.A.I.A., of Holabird & Root & Burgee, Chicago; and Richard Bennett, F.A.I.A., of Loebl, Schlossmann & Bennett, Chicago. A builders' advisory panel set up by the National Association of Home Builders selected their builder teammates.

THE SIX TEAMS

NORTHEAST

Architect-Stubbins

Builder-Frank

SOUTHWEST

Architect-Ford

Builder-Robertson

MIDWEST

Architect-Coddington

Builder-Simms

MIDWEST

Architect-Armstrong

Builder-Drummond

PACIFIC COAST

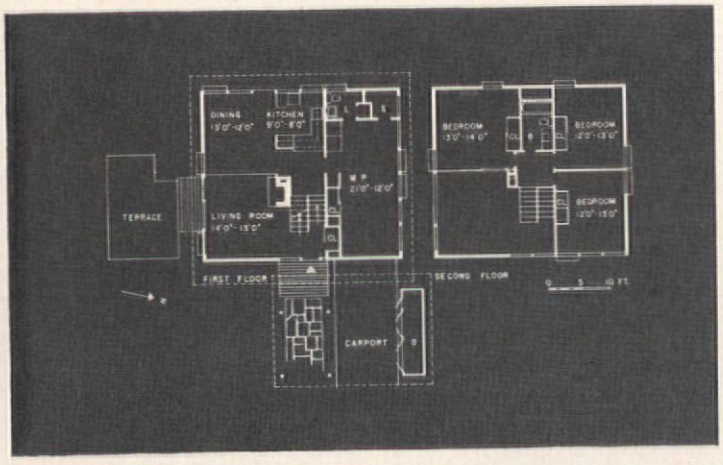
Architect-Jones

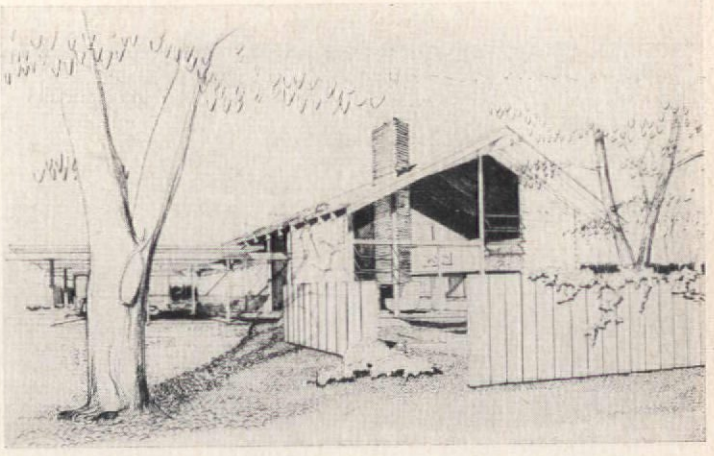
Builder-Eichler

SOUTHEAST

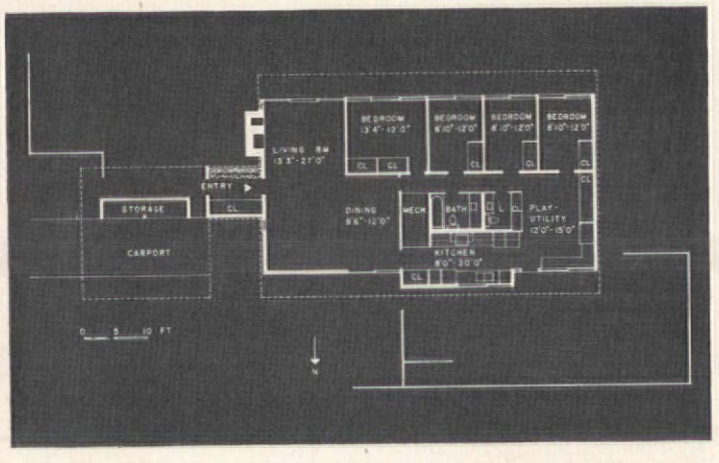
Architect-Lethbridge

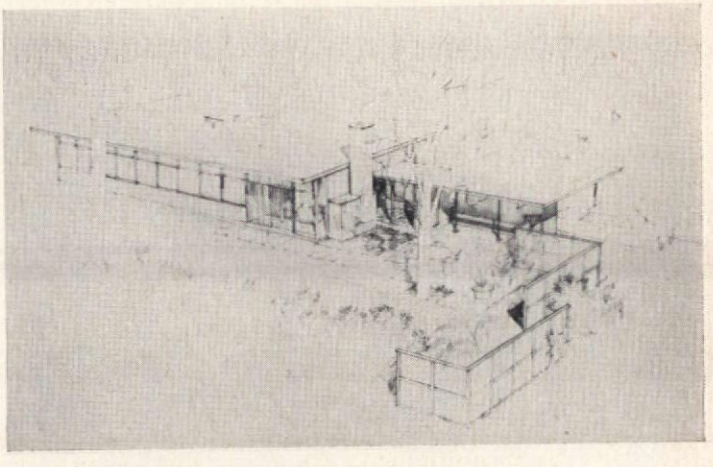
Builder-Luria



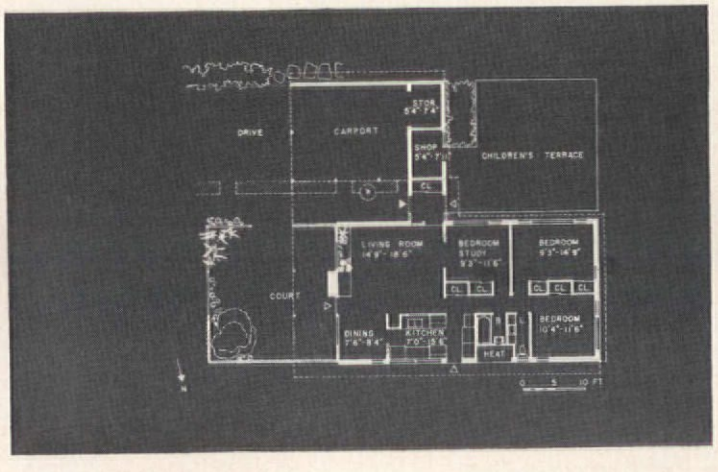


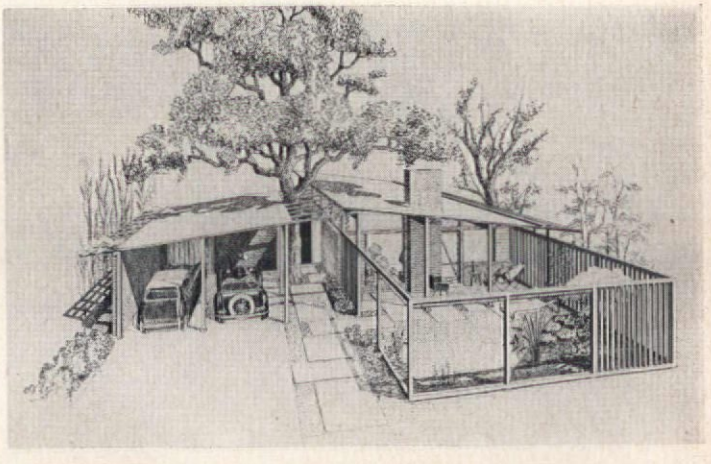
1 STUBBINS-FRANK house gets 1404 sq ft of usable floor space from an area 32 ft 8 in. by 26 ft. Only the living room is at entrance level: kitchen, dining room, multipurpose room with bath are down 3½ ft; three bedrooms and bath are up 3½ ft. Sliding wall panels, open stairway create more "space"





2 FORD-ROBERTSON house, less than 1624 sq ft in floor area, has four bedrooms, generous living room with built-in TV center on one side, conversation center around fireplace opposite. TV center provides extra storage space, partition between living and dining areas. Roof will be concrete lift-slab

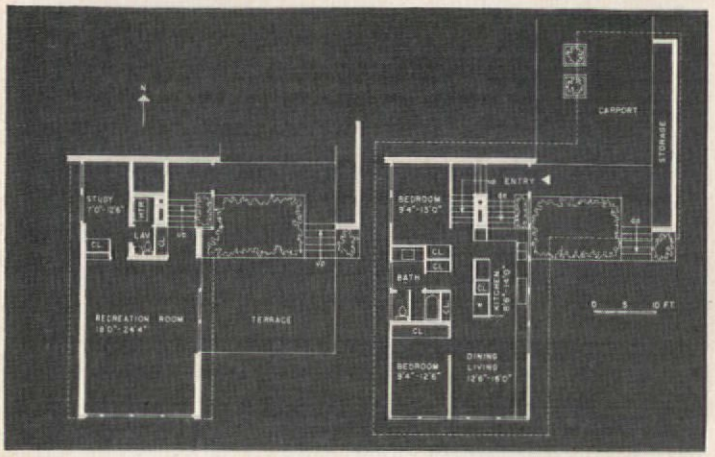


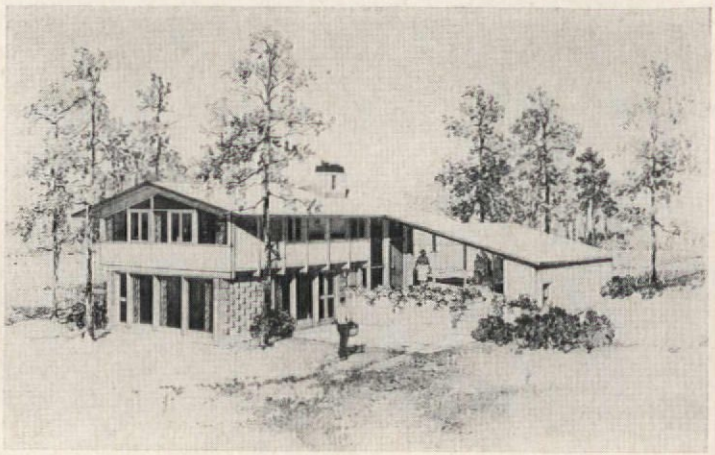


3 ARMSTRONG-DRUMMOND house offers such amenities as a workshop, extra storage in the carport, convertible study-sleeping quarters, a large patio, a central hallway for easy circulation. Living room has floor-to-ceiling windows next to patio. Basic structure contains 1174 sq ft of floor space

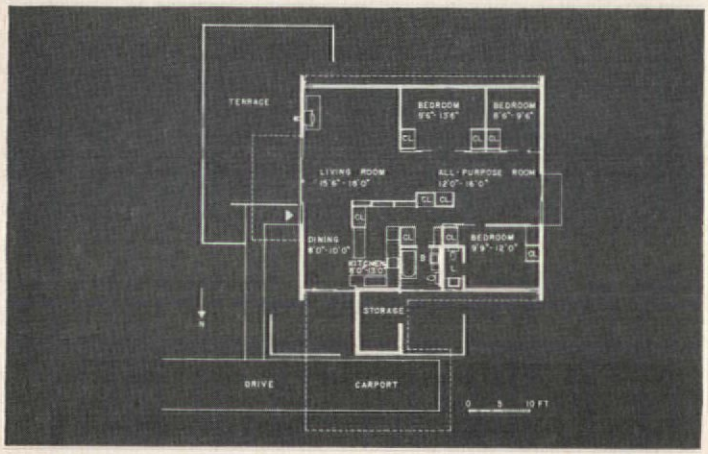
(*Continued on page 12*)

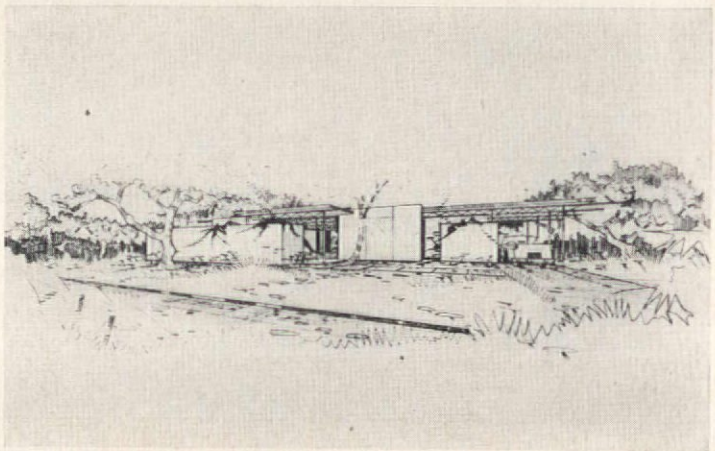
THE SIX HOUSES (*Continued from page 11*)



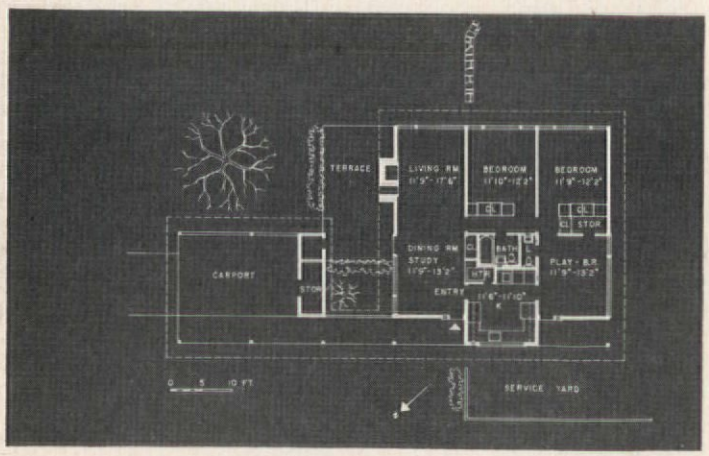


4 CODDINGTON-SIMMS house is another tri-level design for a sloping lot. Its kitchen "housewife supervisory" area on top level has easy view of both front door and ground level patio play area. Kitchen cabinets and counters take advantage of wall area kept low to cut materials and construction costs



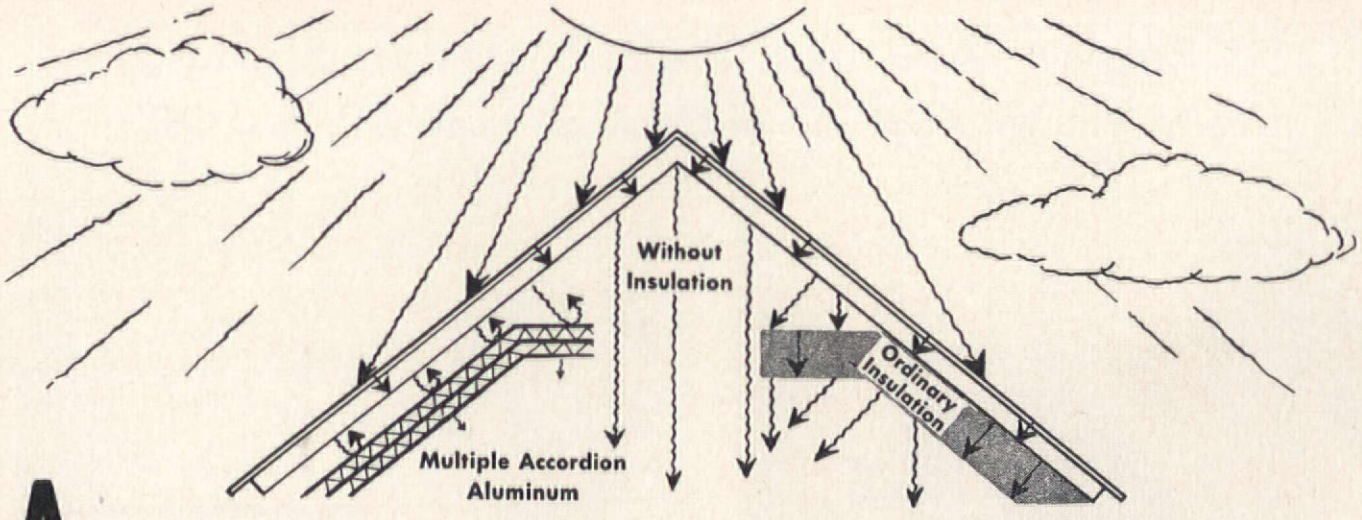


5 JONES-EICHLER house claims three special advantages — flexibility, high fire resistance, quick construction. Floor plan is on 7-ft module, can be turned in any direction, with carport on any side; partitions are non-load-bearing. Steel structure will be left exposed on interior. Floor space: 1395 sq ft



6 LETHBRIDGE-LURIA house uses zoned plan to achieve some degree of privacy for all the family — master bedroom is buffer between living room and children's bedroom. Kitchen and laundry are in center point for housewife supervision of all areas. This scheme, one of three by team, has 1089 sq ft

(*More news on page 15*)



An Empty Roof Space Would Be The Best Insulation Against Summer Sun, *Were It Not For Radiation*

But substantially the only summer heat flow through empty roof space is RADIATION. There is slight CONDUCTION. Heat flow by CONDUCTION through any building space is about 7% of the total. CONVECTION is not a problem—there is no CONVECTION downward.

Ordinary insulation may retard heat for a time, but stores a large amount of heat as compared to empty space. More dense, it is a much better conductor of heat than just air and so more heat passes through it by conduction. Its surfaces have a heat ray absorptivity and emissivity of over 90% and radiate heat into the building through the day, and sometimes into the night.

The solution is to use a material which has little substance and whose surfaces will absorb and emit little radiation. Gold or silver foil would be excellent, but tough multiple accordion aluminum, which weighs but ¼ oz. per sq. ft., is inexpensive and almost as good, with a heat ray absorptivity and emissivity of only 3%.

The metal sheets of multiple accordion aluminum are impervious to water vapor and are continuous, 500 ft. to 750 ft. long. Infiltration under their flat stapled flanges is slight. The scientific construction of multiple layers of aluminum, fiber, and air spaces minimizes condensation formation on or within this type of insulation. Its slight mass is capable of little heat storage.

The National Bureau of Standards Booklet BMS52, "Effect of Ceiling Insulation Upon Summer Comfort" lists on Page 10 the relative effectiveness of the insulations tested in protecting ceilings against summer heat. First in effectiveness was two layers of aluminum foil (both sides of each layer reflecting). Second was full thick (3⅝-inch) ordinary insulation. (Use coupon to get the booklet FREE!)

Try this test: Tack or scotch-tape 3 sq. ft. of multiple accordion aluminum (we will send it free on request) to the underside of a hot roof or ceiling, whether uninsulated, or insulated with ordinary material. Step in and out of the protected area beneath. The difference will be so marked you will need no thermometer.

A new* multiple accordion aluminum, Infra Types 6-S*i* and 4-S*i*, forms a continuous "blanket" of uniform depth between joists, giving the entire area maximum protection against heat loss and condensation.

A *new multiple accordion aluminum, Infra, Types 6-S*i*, and 4-S*i*, gives **edge to edge** insulation between beams or studs, forming a "blanket" of uniform depth against heat and vapor flow, and condensation formation.

*Patent applied for.

COST OF INFRA INSTALLED in new construction between wood joists, material with labor,

Type 6-S*i* under 9½¢ sq. ft.
Type 4-S*i* under 7½¢ sq. ft.

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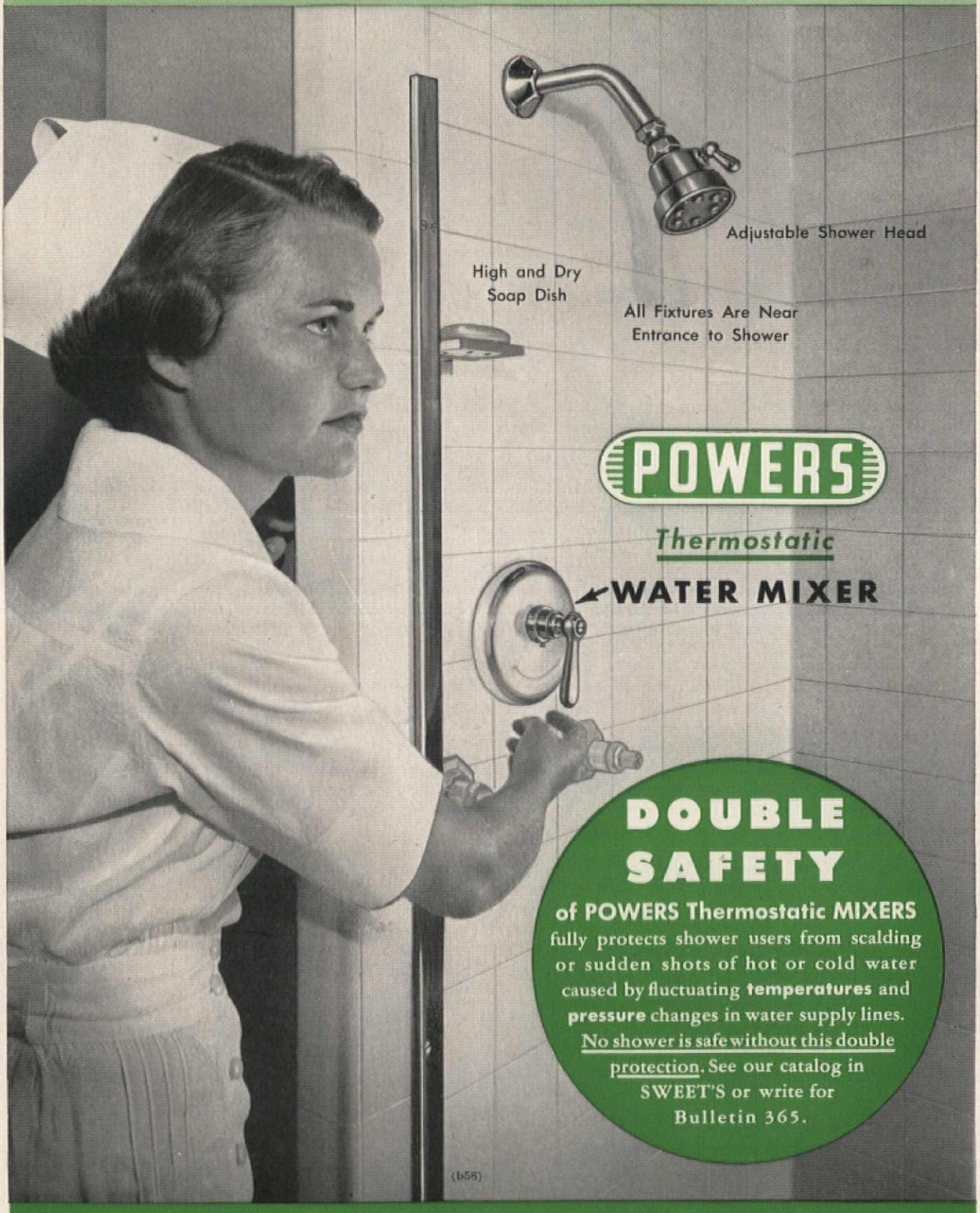

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$32,500 Competition

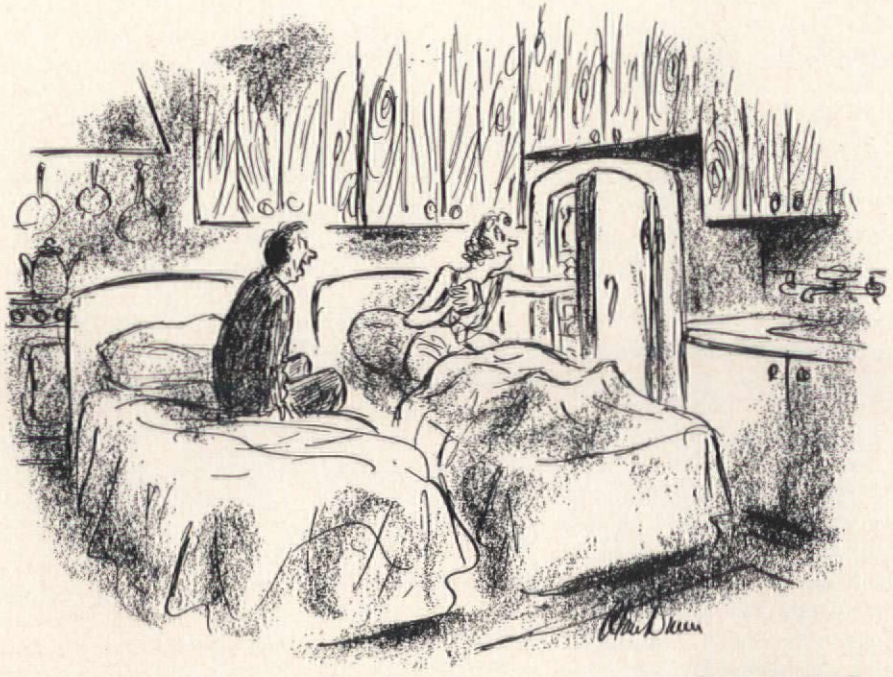
THE RICHEST architectural competition in many a long year has been announced in Chicago, where 30 years ago the $20,000 Tribune Tower competition was rocking the architectural world. The Carson Pirie Scott and Company Centennial Competition in City Planning offers a $20,000 first prize and $12,500 in additional prizes for a plan for the redevelopment of the Central Commercial District of Chicago which will "obtain increased efficiency in the functions of the district, enhancement of the physical facilities, improved convenience to the public and addition of esthetic qualities to the environment." The competition, which has the approval of the Committee on Competitions of the American Institute of Architects, is open to "architects, engineers, city planners, students of these professions and persons in allied occupations who are residents of the continental United States." Team participation is welcomed. Howard L. Cheney, F.A.I.A., is professional adviser. Programs and a data kit, including base plans, are available from: Centennial Office, Carson Pirie Scott and Company, One South State Street, Chicago 3, Ill. The competition closes July 1.

The Shape of the Convention

THREE MONTHS till the 1954 national convention of the American Institute of Architects, and some of the plans for that 86th annual event reached announcement stage last month. "Forces that Shape Architecture" is the theme; Philip Creer of Providence, R. I., New England A.I.A. regional director, is convention chairman, with James Lawrence Jr. of Boston, president of the Massachusetts State Association of Architects, as chairman of the host chapter convention committee; the sixth annual Honor Awards Program will offer special honors in school and hospital design in addition to the general awards. Recipients of the annual Gold Medal, Fine Arts Medal, Craftsmanship Medal and Edward C. Kemper Award for Service to the Institute, presented at the convention each year, will be designated by the A.I.A. Board of Directors at their Washington meeting early this month. The building products exhibit by 69 manufacturers and distributors, co-sponsored by the Producers' Council, this year will have its own awards — citations for the best display booths.

Masonry vs. Metal

HOW TO COPE with "the current threat which the substitution of so-called skin-metal facing for full masonry construction is making against the stone industry" was the major theme of the sixth national convention of the reactivated Stone Council of the International Cut Stone Contractors and Quarrymen's Association in Washington, D. C. The convention voted a substantial program of advertising and promotion; it also set up committees to find new methods of producing and fabricating stone to reduce its final cost and new methods of setting and applying stone "to reflect current tendencies in architectural design." Douglas Whitlock, president of the competing Structural Clay Products Institute, was the convention's keynote speaker. He urged collaboration of the masonry products industries to meet the "common problem" of competition from metal construction.



—Drawn for the RECORD by Alan Dunn

"I didn't mind bringing the dining room into the kitchen—or the living room into the kitchen—but—!"

Medallion contributed for Society of Architectural Historians' fifth annual book award by Prof. Henry-Russell Hitchcock of Smith College in memory of his mother is Wedgewood medallion in white on black jasper in pewter frame of the architect James Stuart (1713–1788). It was modeled by William Hackwood

Top Architectural Histories

THOMAS HOWARTH, English writer, teacher and architect, has won the fifth annual book award of the Society of Architectural Historians for his book "Charles Rennie Mackintosh and the Modern Movement" (see page 46) published in 1953 by the Wittenborn Publications of New York City. Two other books received honorable mentions: "Architecture in Britain 1530–1830" by John Summerson (Penguin Books) and "The Church of St. Martin at Angers" by George H. Forsythe (Princeton University Press).

Honors to Architects

THE AMERICAN ACADEMY of Arts and Letters, the nation's highest representative body of the arts, has elected an architect, Arthur Brown Jr., F.A.I.A., of San Francisco, as one of four new members. Election to the Academy, which has a life membership of 50, designates the nominee as "a creative artist whose works are most likely to

(*Continued on page 16*)

(*Continued from page 15*)
achieve a permanent place in American culture."

THE NATIONAL INSTITUTE of Arts and Letters, a group of 250 American citizens "qualified by notable achievements in the arts, music or literature," has named Architect Eero Saarinen, F.A.-I.A., of Bloomfield Hills, Mich., among five new lifetime members. James Kellum Smith, F.A.I.A., of New York, has been elected one of two new vice presidents. Membership in N.I.A.L. is one of the prerequisites to membership in the American Academy.

More Basements?

CONCRETE BLOCK production has quadrupled in the past 12 years, but the prognosis for 1954 is for only a small increase, according to an address at the 34th annual convention of the National Concrete Masonry Association last month by E. W. Dienhart, the Association's executive secretary. The drop in volume in the house basement market has been of prime concern to the concrete block industry, Mr. Dienhart noted, but he added: "We are firmly convinced that at least in the northern areas the swing is back toward the inclusion of basements in home construction." Of the total volume of concrete block production, Mr. Dienhart said, 57 per cent is used in nonresidential buildings, 11.2 per cent in schools; 37.3 per cent in residential construction; and 4.3 per cent in government construction, largely (3.1 per cent) for public housing.

Labor Offers Cost Aid

COOPERATION WITH CONTRACTORS to reduce building costs was offered by the building trades after a session of the Building and Construction Trades Department of the American Federation of Labor last month in Miami Beach. Taking cognizance of reports from its affiliates across the nation of toughening competition, the Department authorized appointment of committees to work with contractors for the elimination of practices tending to boost building prices. Joseph D. Keenan, the Department's secretary-treasurer, said the present problem is to convince investors that they can get more for their money by having union labor perform their work. The Department represents about two million workers.

Who's Who

ELECTED or re-elected at recent meetings:

John McC. Mowbray of Baltimore, president of the *Urban Land Institute*, independent research organization in urban planning and development, with headquarters at 1737 K Street N. W., Washington 6, D. C.

D. A. Rhoades of Oakland, Cal., as president of the *Aluminum Association*, 420 Lexington Avenue, New York 17.

John E. Jackson, of Pittsburgh, as president of the *American Institute of Steel Construction*, 101 Park Avenue, New York 17, N. Y.

N.A.H.B. SETS GOAL: 1,400,000 HOMES A YEAR

THE TENTH ANNIVERSARY CONVENTION of the National Association of Home Builders, held January 17–21 in Chicago, was — as advertised — the N.A.H.B.'s biggest show ever. "More than 20,000" was the estimate on attendance; for the first time two hotels, the Sherman and the Conrad Hilton — were needed to handle all the exhibits, discussions, speeches, "presentations" and "demonstrations" included in the program; the building products exhibit — with 520 individual booths set up by 315 manufacturers — was thought to be the largest exposition of building materials ever held — in space terms it took well over 100,000 sq ft of floor area.

JURY IN SESSION: Judges look over an entry in N.A.H.B. Design Merit Award Competition. Standing (left to right) Herman York, New York architect, and Alex Simms, Dayton, Ohio, builder. Seated: Alfred Parker, architect, Miami. Edward Burch, architect, Chicago is in foreground

Home builders assembled in optimistic mood — on the business outlook in general and their own expectations in particular. "Close to a million units" was the 1954 level predicted by outgoing President Emanuel M. Spiegel; at their closing session N.A.H.B. delegates set a goal for their industry of 1,400,000 units annually for the next 10 years — a new peak their policy statement said was justified by population gains and the need for replacement of millions of substandard homes.

Prospects for 1954 homebuilding and "how-to-do-it" workshops got the major program emphasis. Government officials talked on mortgage financing, trade-in homes, housing for minorities, and the legislative probabilities and possibilities in the development of the new housing law. Industry men discussed taxes, selling methods, land planning, management, merchandising, rental housing, design and public relations. There were special sessions devoted entirely to prefabricated housing, building large subdivisions and selling them, and interior decoration. The program featured actual demonstrations on how to build better at lower cost, movies, slides and even a stage show to demonstrate proper wiring methods.

The point that good design can help sell builders' houses appears to have been made, at least in principle, and architects are more visible at the builders' convention than they used to be.

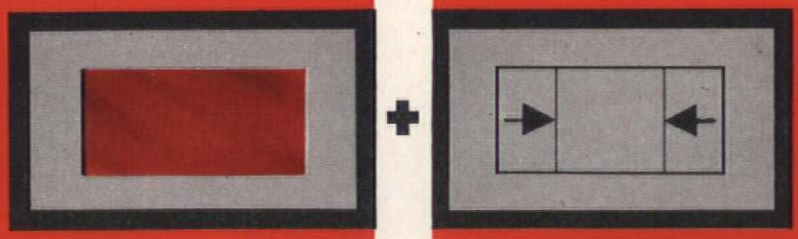
They were major participants in two sessions at this year's convention. In one, the architects of the U. S. Gypsum Company's Research Village (see pages 10–12) joined their builder team-mates to tell "How the U. S. Gypsum Houses Were Designed." Another, forthrightly entitled "Good Design Is Good Business," put Edward Fickett, A.I.A., Los Angeles, Alfred Parker, A.I.A., Miami, Carl Norcross, executive editor of *House and Home* and Leonard G. Haeger, A.I.A., director of N.A.H.B.'s Research Institute, on a panel intended — the homebuilders were told — "to show you the difference in sales and profits if you take advantage of the good you can do with better design."

R. G. Hughes of Pampa, Tex., is the new N.A.H.B. president. Nathan Manilow of Chicago was elected first vice president; Paul Burkhard, Glendale, Cal., second vice president; V. O. Stringfellow, Seattle, treasurer; and Franklin L. Burns, Denver, secretary.

(*More news on page 20*)

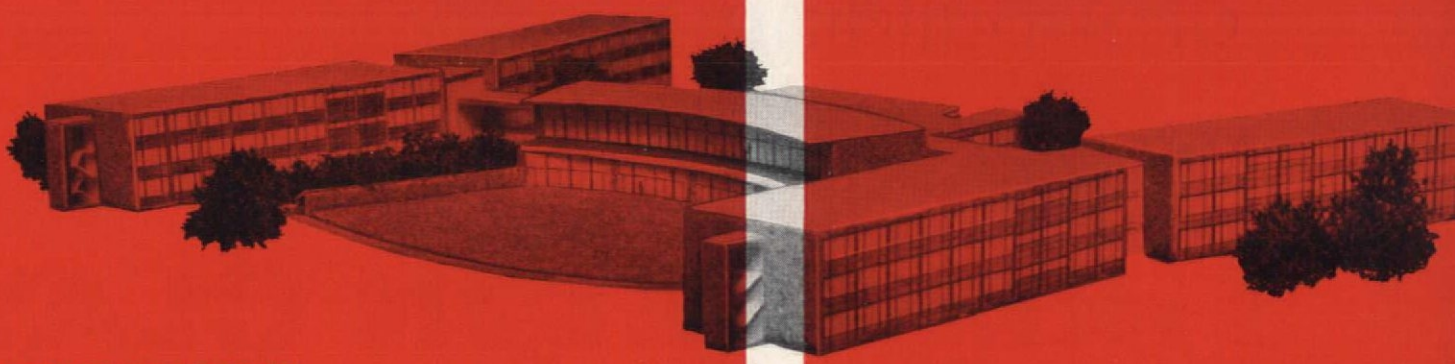
a new curtain wall idea

drastic cuts in job-site labor are achieved by new pre-assembled system; steel-glass/insulated-metal-panel complex offers unusual flexibility for functional design



Mirawal's colored, porcelain-on-steel facing panels—insulated

Steelbilt's horizontal sliding windows built integrally with complete wall frame



In less than 1000 man hours of job-site labor, 80 three-story curtain wall units (11′-1½″ x 27′-10⅜″) were installed—ready for finish—at the Colorado A & M Dormitories.

With an estimated 60 cents of every construction dollar going into labor on this type of project—the resulting economy is significant.

Colorado A & M Dormitories (model) Fort Collins, Colorado
architect James M. Hunter, AIA
general contractor Mead & Mount Construction Co.
Steelbilt dealer & erector K. C. Construction Supply

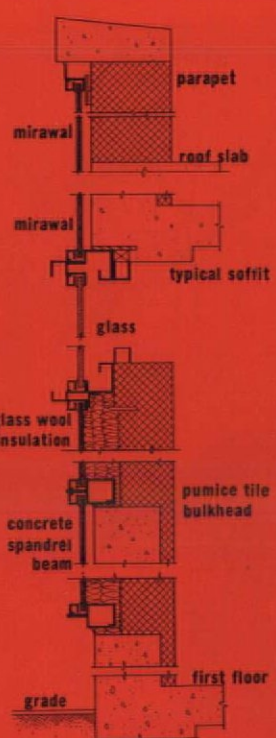
This attractive, light weight wall system was designed by James M. Hunter, AIA, in collaboration with Steelbilt engineers. All components of each complete unit are pre-assembled and pre-tested at the factory—including Steelbilt's top roller-hung, horizontal sliding windows. Take-up allowances are provided at each joint to expedite faultless installation. Units arrive at job-site knocked down into only four parts.

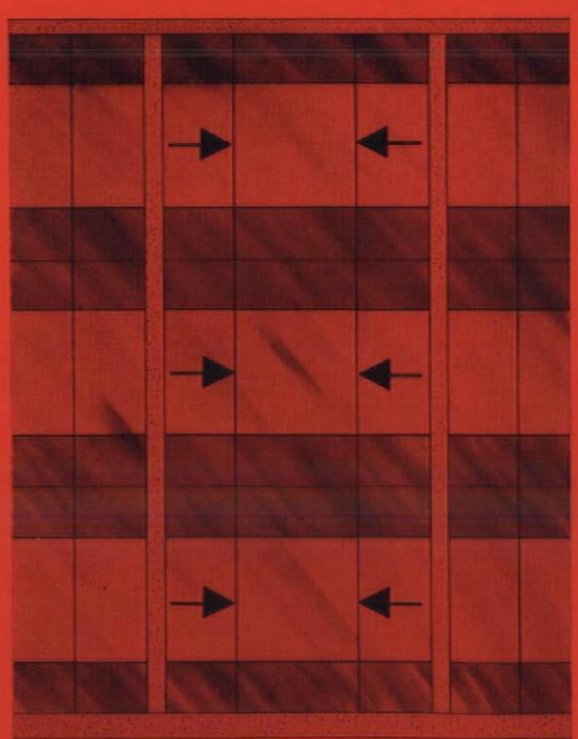
Mirawal porcelain-on-steel panels lend beauty to the wall design. Their color has exceptional depth and lustre. They install quickly with Steelbilt's patented, rocker type glazing bead. Panels have been backed with 2″ of glass wool and 4″ of pumice block and plaster to achieve a "K" factor of about .07.

Exterior Mirawal has a lifetime vitreous porcelain surface fused to #32 gauge sheet steel. This is inseparably laminated to Masonite Panelwood, which in turn is laminated with #28 gauge galvannealed steel, as a seal against moisture penetration.

A diversity of wall systems can be designed with Steelbilt sections and Mirawal panels. Sales engineers are available for consultation.

For catalogs and more detailed information write to:





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Case history of CECO on-the-job performance

HOW CECO JOIST CONSTRUCTION HELPED SAVE $4.00 PER SQUARE FOOT

Erecting a building with firm footings in downtown Chicago clay is no simple task. Accomplishing that, plus cutting costs, is truly a stand-out feat.

Such is the story of the Remington Rand Chicago Office Building and the problem solved by Architects Bartlett, Watts and Rosene.

Analysis indicated that usual column spacings would impose excessive pressures on the subsoil, causing piles to drift. The solution: increase the distance between pile groups and spud every third pile.

But that created a problem . . . how to span the wider bays economically and keep the dead load on each pile group to a minimum. The architects knew Open-Web Steel Joists offered the lightest floor system, so called for their use.

Conduit and air-conditioning ducts were run through the open webs, resulting in further economies.

"Being self-centering and requiring no shores, Steel Joists were fast to erect," said Architect Harry Owen Bartlett. "Thus the contractor, J. L. Simmons Co., Inc., was able to pour slabs early, allowing masonry units to be stored on the floors and then laid up from inside, saving scaffolding."

Total cost of the building was $13.75 a square foot, compared to some comparable buildings costing $17.75—a saving of $4.00. Here is another example of Ceco performing on the architect-owner-contractor-supplier team.

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1955 BUDGET LEAVES MORE TO PRIVATE ENTERPRISE

All Major Construction Programs Cut, Most Only Slightly, As Budget Sets Total Expenditures $5.3 Billion under 1954

BY ERNEST MICKEL

THE FIRST BUDGET developed entirely by President Eisenhower marks — according to the message accompanying it — "the beginning of a movement to shift to state and local governments and to private enterprise Federal activities which can be more appropriately and more efficiently carried on in that way. . . . In those cases where Federal participation is necessary, the effort of this Administration is to develop partnership rather than an exclusive and often paternalistic position for the Federal government."

In a $65.6 billion budget which estimated total fiscal 1955 expenditures at $5.3 billion less than the latest estimates for fiscal 1954 expenditures and $8.4 billion less than fiscal 1953 expenditures, decreases were recommended in every instance where major construction programs were involved. The reductions were not pronounced, in most cases (see table); the proposed $4 billion cut in defense spending, for example, fell far more heavily on other aspects of the military budget than it did on construction. A considerable portion of the planned expenditures, however, represented "working off" previous obligations; the President's $56.3 billion request for "new obligational authority" (that is, authority to make contracts) is $4.4 billion less than the current year, $23.9 billion less than the fiscal 1953 total and $35.1 below the Korean war peak in fiscal 1952.

The 1955 budget actually includes a larger outlay for the development of atomic energy resources; but the President's message made it clear that while operating costs will rise during the fiscal 1955 period, the initiation of new construction projects will be at a lower level than during recent years.

Here is a rundown on some of the construction programs as presented to the Congress in the budget:

Public Works — Expenditures for *military* public works will be maintained at the 1954 level approximately, as work goes forward on air bases, antiaircraft, radar sites and other installations. A sum of $1109 million has been proposed as new obligational authority for the military public works program in fiscal 1955. The Administration plans to *spend*, however, $1650 million in the year beginning July 1. This compares with $1687 million for the current year and $1913 million actually spent in fiscal 1953. The outlay for fiscal 1951 in this field was only $439 million; it jumped to $1819 million in 1952.

Expenditures for *civil* public works were estimated to be $1639 million for the coming fiscal period. Of this amount, only $77 million is for new projects and commitments. [In addition, the U. S. Chamber of Commerce reported in its recently-published budget analysis, some $12 billion in construction work has been authorized by general or specific legislation.]

Three fourths of the civil public works program is accounted for by the river basin programs of the Army Corps of Engineers, the Bureau of Reclamation, and the Tennessee Valley Authority.

Atomic Energy — Under the 1955 budget, outlays for development and control of atomic energy would rise to a new high level. Operating costs will shoot up as newly-completed plants are brought into production. Capital expenditures will continue at a high level as construction goes forward on major new plants authorized in recent years. But significantly for the building industry, the President indicated that new construction projects to get under way in 1955 will be limited essentially to facilities directly related to the production program and to several research and development facilities. The volume of new work will not measure up to that of recent years.

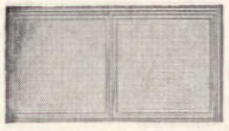
Program	Net Expenditures (in millions) Fiscal Years		
	Actual 1953	Est. 1954	Est. 1955
Military public works	$1913	$1687	$1650
Atomic energy development	1791	2200	2425
Housing and community development	549	57	−277*
Schools (construction and operation in areas "federally impacted")	201	199	139
Hospitals (Hill-Burton)	75	65	50
Bureau of Reclamation	231	180	164
Federal Aid to Highway construction	550	592	582
Civil Defense	51	74	68
Defense community facilities and services	1	4	2

*Excess of payments and collections over expenditures, anticipating sales of mortgages held by Federal National Mortgage Association.

Schools — President Eisenhower asked for $40 million for aiding school districts in their construction programs during fiscal 1955. This amount, he said, together with the appropriation of $70 million for fiscal 1954, would provide for the most urgent classroom needs of the districts eligible for the aid under the extended program. He estimated the funds are building nearly

(*Continued on page 288*)

By using Glide sliding aluminum windows in the Great Western Plains Building in Lubbock, Texas, many economies were made possible . . . Glazing will be done from the inside of the building. A minimum crew will



install the windows, also from the inside of the building. The elimination of special window cleaning bolts and costly scaffolding saves dollars and lowers insurance rates . . .

Glide Windows require no painting. They may be cleaned from the inside of the building, and they are guaranteed for the life of the building . . . In addition Glide Windows are unmatched for quality, beauty, and performance. In design, in engineering, in craftsmanship, the architect and builder knows there is no equal to Glide Windows.

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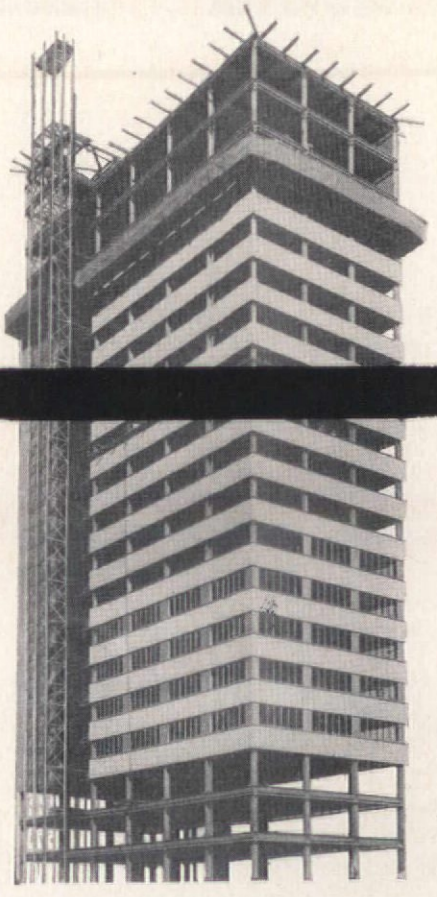
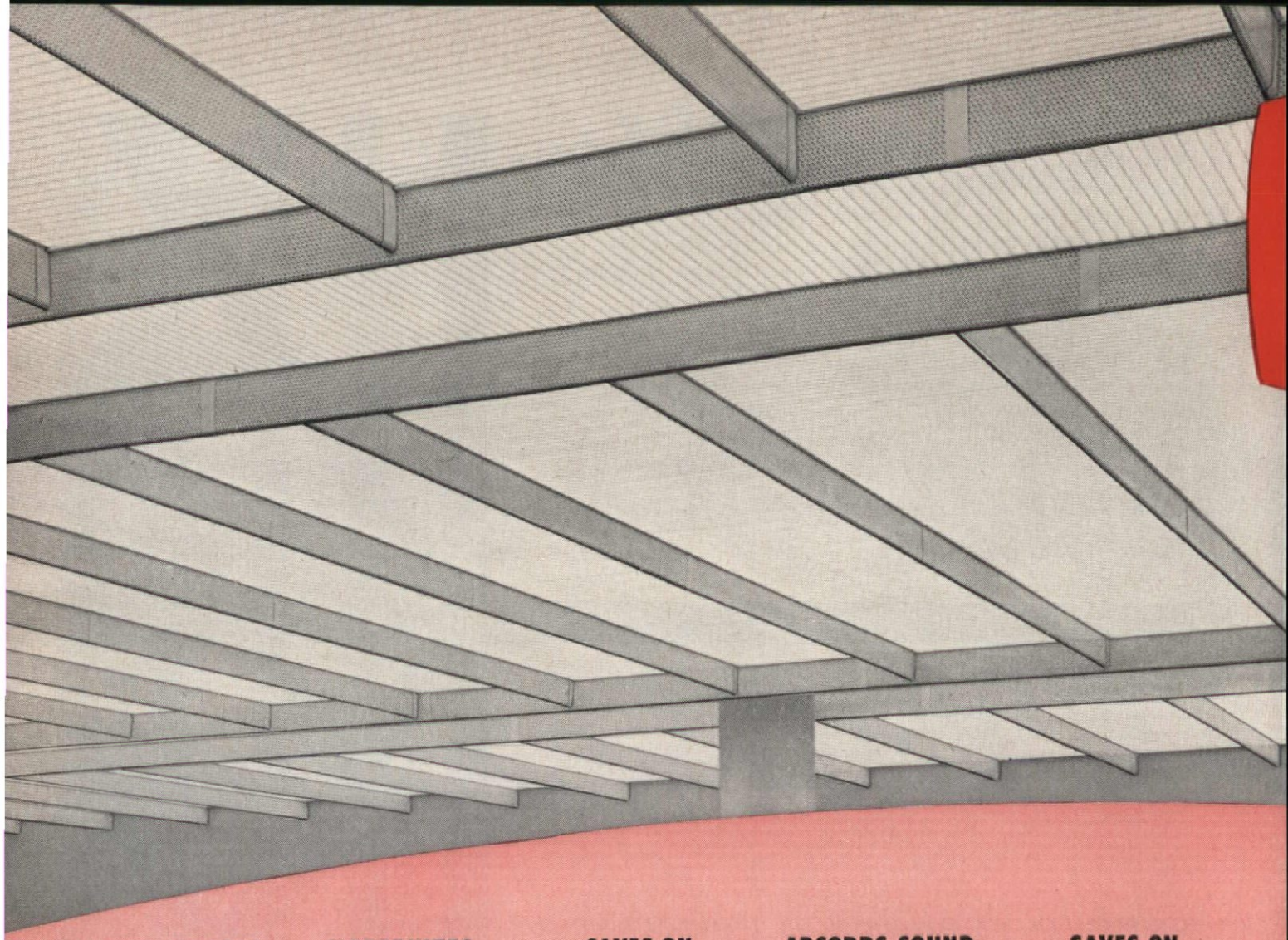


Architect: David S. Castle Co.



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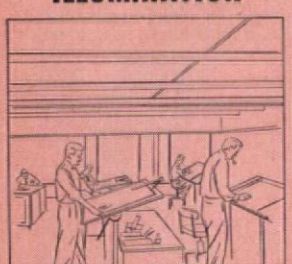
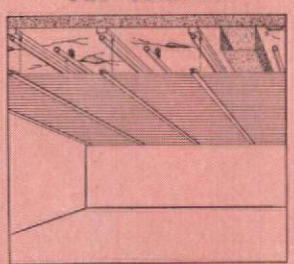


Acusti-Luminus Ceiling is both efficient and easy on the eyes. Foot-candles may be regulated by varying the number of fluorescent lights above Lumi-Plastic ceiling. The source of light is not perceptible—thus creating a "luminous environment" for minimum eye strain and maximum working efficiency.

MODERNIZES OLD CEILINGS

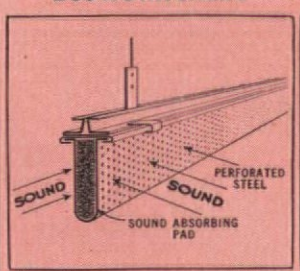


New lowered ceiling hides pipes, sprinklers, ducts, cracks. This gives ceiling clean, modern lines. Not only are these old eye-sores hidden, but the Acusti-Luminus Ceiling makes a readily accessible cover for the pipes, ducts, and valves. To get to any of these, the plastic is simply rolled up like a blind.

SAVES ON MAINTENANCE

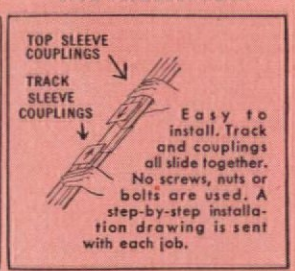
Rolls easily for washing and relamping. And light is so evenly diffused up to 20% of lamps may burn out, before dark spots are noticeable. Thus, *all* lamps may be replaced at once. While plastic is down, it can be washed and destaticized in a detergent or by a specially furnished machine for only 1¢ to 3¢ a sq. ft.

ABSORBS SOUND ECONOMICALLY



Acusti-Louvers absorb sound, also louver out the view of ceiling. Clip-on acoustical baffles can be added or subtracted as requirements in an area vary to meet any acoustical need. Their cost is far less. Lumi-Plastic is "transparent" to sound so that any existing acoustical material above it still functions.

SAVES ON INSTALLATION



Installation is clean and simple. No special skill is required for simple and rapid assembly of these lightweight units. The product is self-spacing, rigid, and fool-proof. Complete shop drawings and instructions are included. Acusti-Luminus engineering staff is available in major cities for consultation.

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Acusti-luminus ceilings
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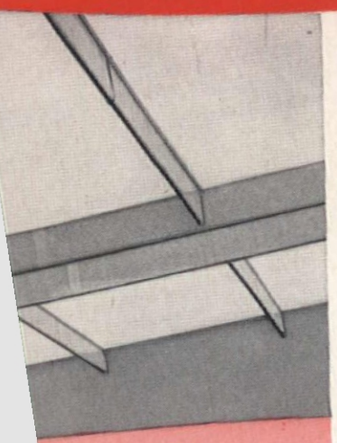

OVE—*Partial view of Acusti-minus Ceiling at J. A. Folger & , Kansas City, Mo., makers of ger's Coffee, shows how former pping room was remodeled to ke this modern, efficient ounting department.*
chitect: Emmett M. Robison of pper, Robison and Carlson, nsas City.

Bring Modern Design well within the Budget

Now! Evenly diffused light...without shadow or glare! Streamline your remodeling jobs and "dreamline" your new ones—with beautiful, modern Acusti-Luminus Ceilings.

Light is uniformly diffused by the lightweight, unbreakable corrugated Lumi-Plastic—so there is no shadow or glare. The result is a source of low brightness—of any intensity.

A solid "ceiling of light"—this is the last word in the newest trend toward large sources of light—already 2800 installations in 36 states!

Excellent acoustical correction is also provided by noise-absorbing fins which may be hung at intervals below the plastic ceiling.

The cost is low—less than conventional ceilings with the same illumination and sound correction.

Quickly and easily installed—these lightweight units make possible sizeable savings in installation. Also, once installed, the ceiling is readily adaptable to future interior alterations such as new walls and partitions.

Your inquiry is invited on any installation you may have in mind—or simply write for more information.

LABELED BY UNDERWRITERS' LABORATORIES *Acusti-Luminus Ceilings are UL labeled for use under sprinkler systems—without any change in fire insurance rates. In event of fire, the plastic (which does not support combustion) softens and falls to the floor so sprinklers function normally.*

VER 2800 INSTALLATIONS IN 36 STATES!

elow are a few of the many installations factories, offices, drafting rooms, criti- al work areas, stores, banks, schools, braries, and public buildings:

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American Cyanamid Co.
E. I. DuPont de Nemours & Co.
Ford Motor Co.
General Electric Co.
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Otis Elevator Co.
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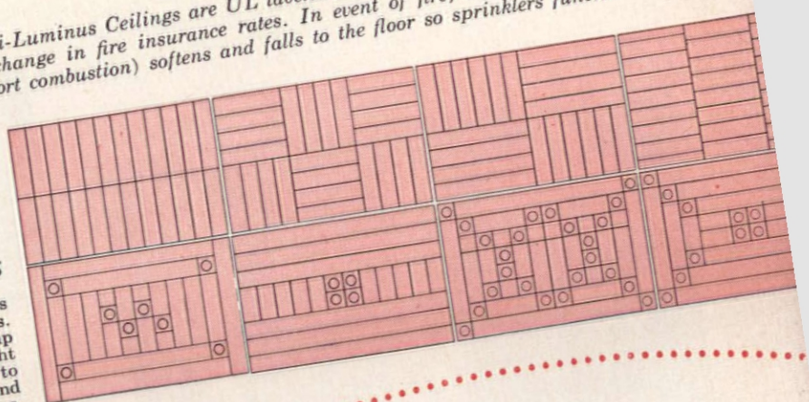
Standard Oil Co.
Stewart-Warner Corp.
Union Carbide and Carbon Corp.
University of California
Western Electric Co., Inc.
Westinghouse Electric Corp.

unlimited designs possible with Acusti-Luminus Ceilings

Simple construction allows the creation of varied designs. Modules of 3 feet make up the design. Spotlight sections may be inserted to emphasize displays and merchandise areas.



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PEOPLE IN THE NEWS

ONE YEAR'S PROGRESS and a new year's plans were discussed at a two-day meeting of the A.I.A. Public Relations Committee with representatives of Ketchum Inc., A.I.A. public relations counsel, in San Francisco late in January. Above (left to right): Anson Campbell, Ketchum; Frank McNett, A.I.A., Grand Island, Neb.; Herbert C. Millkey, A.I.A., Atlanta; A.I.A. Executive Director Edmund Purves; Chairman John Root, F.A.I.A., Chicago; Vice Chairman Francis Joseph McCarthy, A.I.A., San Francisco; Karl Kamrath, A.I.A., and Maurice Sullivan, A.I.A., Houston; Walter Megronigle, Ketchum

FRANK LLOYD WRIGHT in a familiar pose — philosophizing for an eager circle of listeners; in this case, members of the new Monterey Bay, Calif., chapter of the A.I.A., at whose charter dinner he spoke. More or less facing camera (from left): Chapter Treasurer William Concolino, Director Wallace Holm, Secretary Jerome Kasavan, Vice President George Willcox, President Francis Palms, and A.I.A. Sierra Nevada Regional Director Charles Matcham

CENTRAL PENNSYLVANIA A.I.A. annual meeting V.I.P.s have the A.I.A. public relations program's "Facts Package" as their prop in this "candid": (left to right) Speaker Dr. Winston Weisman, assistant professor of fine arts at Pennsylvania State University; retiring President Dr. Milton S. Osborne, Penn State architecture head; new President William J. Zalewski

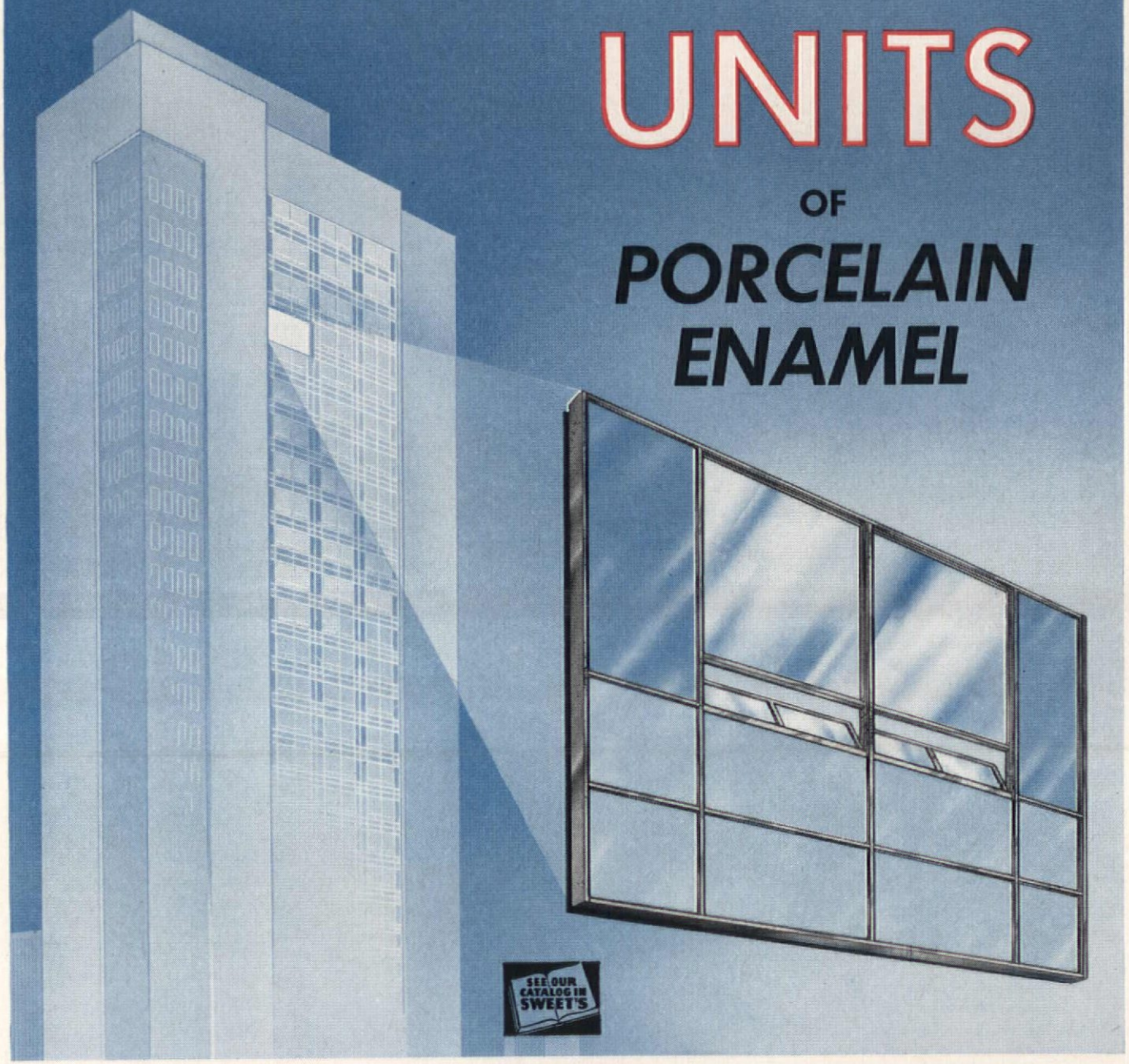
(More news on page 26)

SINNED AGAINST, FOR ONCE: in annual conclave at Rochester way back in December, members of the Architectural Photographers Association sat for this photograph (no credit line). Back row: Rodney McKay Morgan, Graham Warrington (Canada), Dewey Mears, Don Morgan, Richard Wurts. Middle: George Cushing, Robert Massar, Phyllis Dearborn, Robert Lautman, Rudy Leppert. Front: R. Marvin Wilson, Giovanni Souter, Cortland V. D. Hubbard, Joseph Molitor (association's new president), Ed Hedrich, Sigurd Fischer

WEST VIRGINIA A.I.A.'s new officers, elected at recent annual meeting: (seated) President Charles A. Haviland (left), Charleston, and Vice President William H. Grant Jr., Clarksburg; (standing, left to right) Secretary-treasurer G. Cameron Hunter and retiring Vice President Paul Vaughan and retiring President Irving Bowman, Charleston, newly-elected members of the Board

TENNESSEE architects have outgrown their single state A.I.A. chapter, are now organized in four chapters and a state society. Above: A.I.A. President Clair Ditchy presents charter to president of new Tennessee Society of Architects, William P. Cox, while (left to right) Society officers Zeno L. Yeates, George E. Palm Jr. and Clinton E. Brush III look on. Seated: A.I.A. Gulf States Regional Director Howard Eichenbaum. Below: Mr. Eichenbaum officiates at charter presentation to new Memphis Chapter President R. T. Martin; other chapter officers (standing, left to right) are Zeno L. Yeates, Ed S. Thorn, John D. Bland, W. D. McKinnie Jr. The East Tennessee Chapter received its charter at Knoxville a few weeks later

INTEGRATED WALL UNITS OF PORCELAIN ENAMEL



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NEWS FROM CANADA *By John Caulfield Smith*

YOUNG ARCHITECTS, 29 AND 30, WINNERS OF $10,000 COMPETITION, $1.5 MILLION JOB

DOUGLAS C. JOHNSON, 30, and Cunningham S. McWhinnie, 29, of the eight-months-old Windsor, Ont., architectural firm of Johnson-McWhinnie, are the winners of a $10,000 competition for the design of Windsor's new civic auditorium and convention hall. Johnson-McWhinnie, selected over six other entries, will also have the commission for the project, expected to cost about $1,500,000 including site.

The winning design (see below) provides a two-level auditorium, with a 2000-seat main auditorium on the upper level and a Little Theater, to seat 400, on the lower level, which is partially below grade; and a convention hall to seat 1800, with the floor at ground level so trucks and cars may be driven into it for display purposes. The two units are separated at ground level by an open colonnade and a sculpture court; at second-floor level they are joined by the public restaurant, which has a glass wall overlooking the Detroit River. There is also an outdoor concert theater to seat 500.

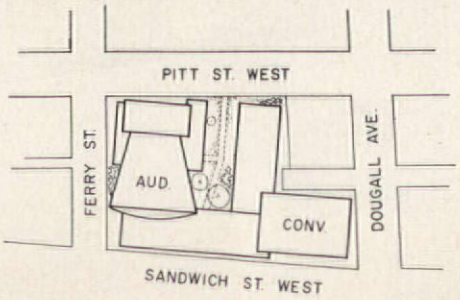
Why the Jury Liked It

The three-man jury listed among "some special merits which influenced the decision" these points: "A simple, logical use of the site joining the river and the park; a graceful entrance from Pitt Street, opening into a delightful sculpture court; the placing of all parking areas to the extreme boundary of the land so that the future continuity of the park will not be broken; excellent placing of outdoor theater."

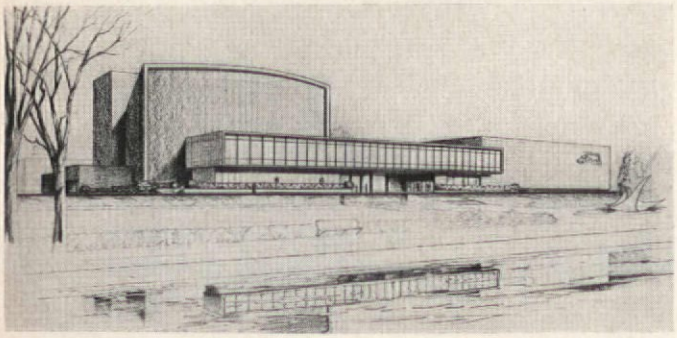
George D. Gibson, Toronto architect, was professional adviser and chairman of the jury. Other members were Peter Tillmann, M.R.A.I.C., London, Ont., and Eero Saarinen, F.A.I.A., of Bloomfield Hills, Mich. The competition was open to Windsor architects only.

Winners Are Toronto Alumni

Both members of the winning firm are natives of Windsor and graduates — Mr. Johnson in 1950 and Mr. McWhinnie in 1951 — of the School of Architecture of Toronto University. Until they opened their own office at 1645 Ottawa Street, Windsor, last July, Mr. Johnson had been with Giffels & Vallet of Canada Ltd. and, earlier, Allward & Gouinlock, Architects, of Toronto. Mr. McWhinnie had been first with Allan Construction Company and then with C. A. McElroy, M.R.A.I.C., Windsor.



Plot plan and perspective of prize-winning Johnson-McWhinnie scheme for Windsor civic center. Auditorium and convention hall are joined at first-floor-level by an open colonnade, at second-floor by public restaurant



A.I.A. President Clair W. Ditchy and Ontario architects' retiring president, Gordon S. Adamson. Below: Kenneth C. Welch of Grand Rapids and Mrs. Ditchy, with R. S. Morris, R.A.I.C. president

ALVIN PRACK ELECTED TO HEAD ONTARIO ARCHITECTS

THE 64TH ANNUAL CONVENTION of the Ontario Association of Architects, which broke all previous records for attendance, named Alvin R. Prack, of the Hamilton, Ont., architectural firm of Prack & Prack, as the new president of the Association. The convention was held January 22–23 at the Royal York Hotel in Toronto.

Mr. Prack heads a seven-man Council which includes Gordon S. Adamson, Toronto, immediate past president; George D. Gibson, Toronto, vice president; George Y. Masson, Windsor, treasurer; and members William H. Gilleland, Ottawa, Philip Carter Johnson, London, and E. C. S. Cox, Toronto.

Prof. H. H. Madill, director of the University of Toronto's School of Architecture, continues as chairman of the association's registration board, with William R. Souter of Hamilton as vice chairman. Other members are John M. Kitchen of Ottawa, William E. Fleury and Eric W. Haldenby of Toronto.

John D. Miller of Toronto has been reappointed secretary of both the council and the registration board.

(*Continued on page 30*)

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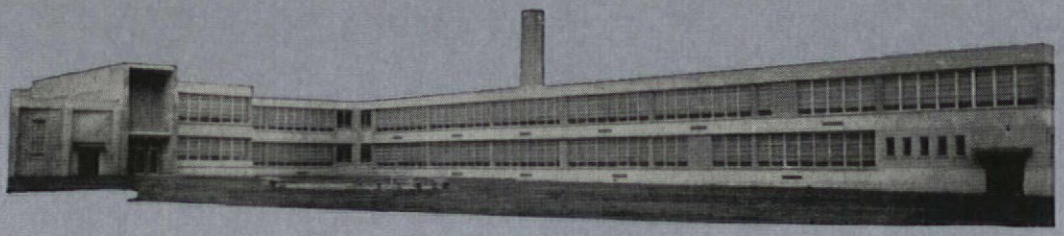
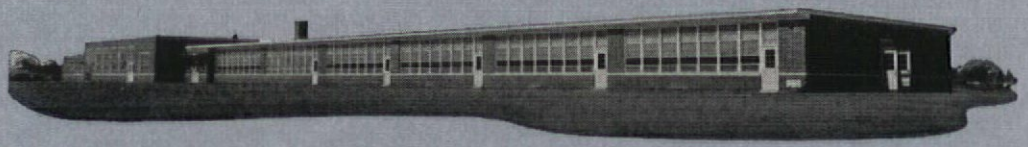
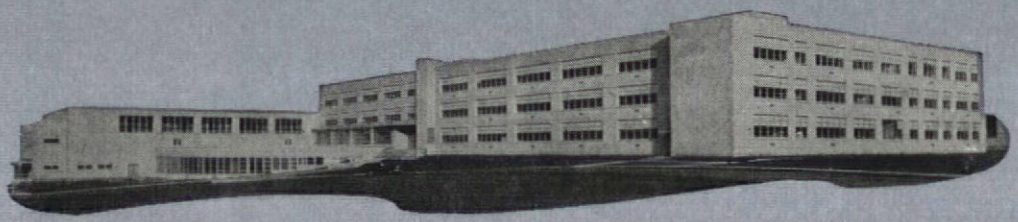


• South Mountain Junior H.S., Allentown, Pa.
Architects: Heyl, Bond & Miller
Contractor: L. W. Hunsicker Co.

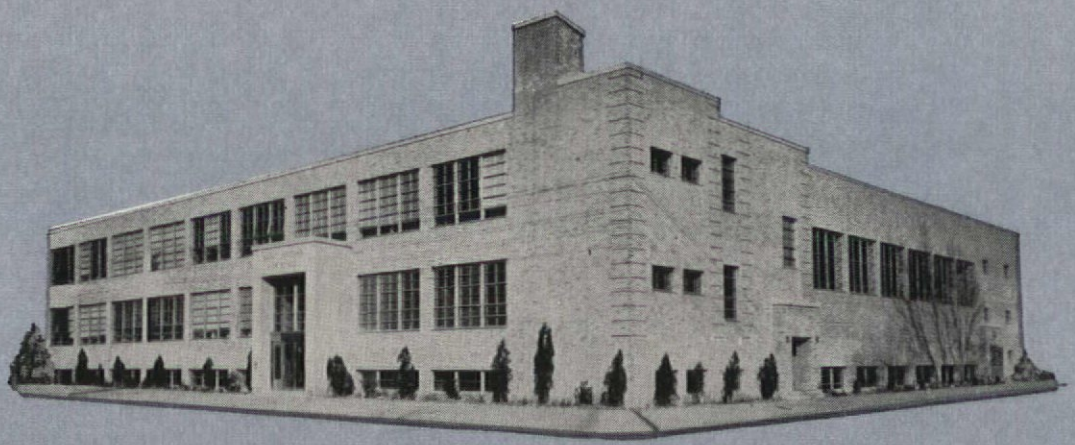
• Colwyck School, Wilmington, Del.
Architect: E. William Martin
Contractor: Rupert Construction Co.





• Troy High School, Troy, N. Y.
Architect: Frank J. Morgan
Contractor: Christensen & Nielsen

• St. Joseph's Parochial School, Camden, N. J.
Architect: Thomas J. Earley



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For copy of our 1954 window specifications book and names of approved manufacturers, see Sweet's (16a/ALU) or write today. Address Dept. AR-3.

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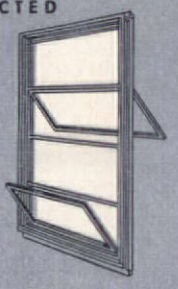
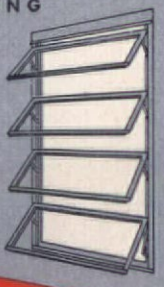


CASEMENT

AWNING



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CANADA (*Continued from page 26*)

Above: panel on civic center design at Ontario (at right) included F. H. Marani and George D. Gibson, Toronto; A.I.A. President Clair W. Ditchy of Detroit; Anthony Adamson, Toronto Township reeve, the chairman; Controller Leslie H. Saunders and Building Commissioner K. S. Gillies, both of Toronto. Left: some 1954 officials — W. H. Gilleland, Ottawa (councillor); George Y. Masson, Windsor (treasurer); Gordon S. Adamson, Toronto (immediate past president); Alvin R. Prack, Hamilton (president); George D. Gibson, Toronto (vice president); E. C. S. Cox, Toronto (councillor)

The board, which is charged with regulation of the architectural profession in Ontario, reported an eight per cent increase over last year in the number of practicing architects in the province. There are now 660, all members of the O.A.A.

The convention program featured a number of American guests. Clair W. Ditchy of Detroit, president of the American Institute of Architects, participated in a seminar on civic centers led by Reeve Anthony Adamson, of Toronto Township, himself an architect. A.I.A. national secretary George Bain Cummings of Binghamton addressed a luncheon meeting on architectural assets and liabilities, and Kenneth C. Welch, A.I.A., of Grand Rapids discussed shopping center design.

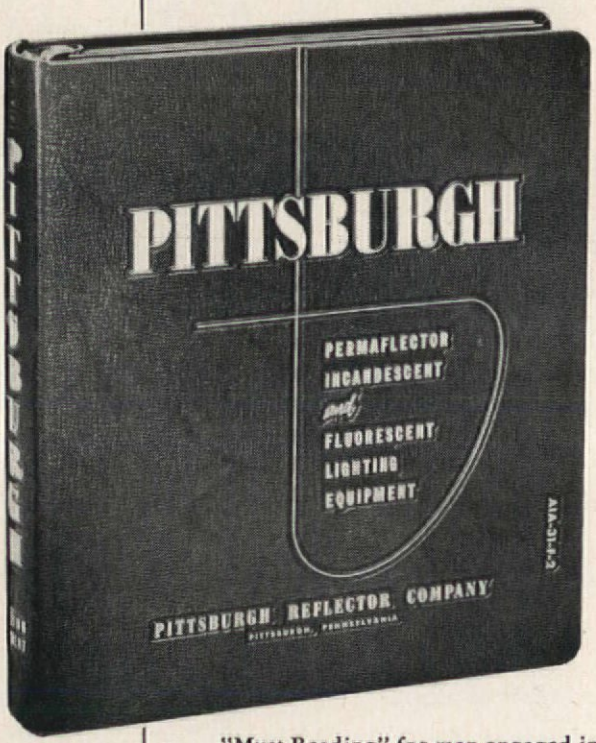
Awards Presented

At the annual dinner, Toronto Architectural Guild Medals were presented to Hart Vincent Massey and Irving Grossman, with W. L. Somerville, past president of the Royal Architectural Institute of Canada, officiating. Yusing Yiu-Sing Jung and Donald H. Husson received O.A.A. prizes of $100 each.

A total of 65 new members of the Association, 33 of them University of Toronto graduates, were given their certificates. The new members included one girl, Miss Gwyneth Cooper-Jones of Niagara-on-the-Lake, Ont.

(*Continued on page 32*)

the comprehensive handbook



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CANADA

(*Continued from page 30*)

MAY EQUAL '53 SPENDING ON PLANT AND EQUIPMENT

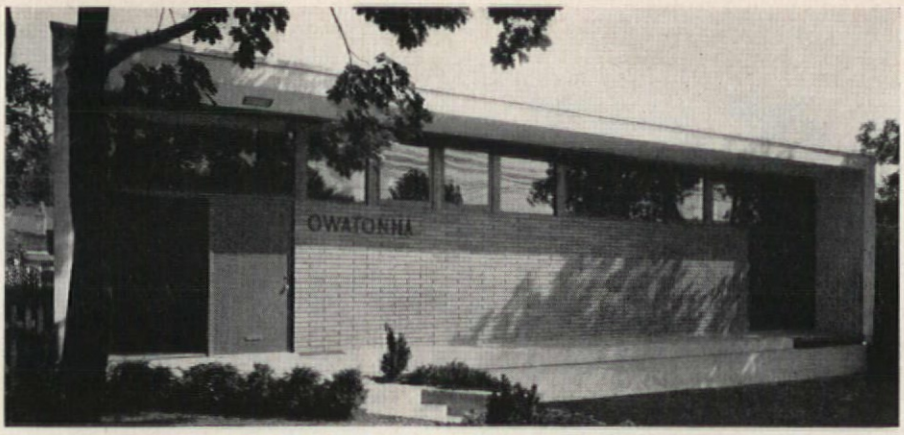
Canada's Department of Trade and Commerce, though unprepared to disclose in detail findings of its survey of capital spending plans for 1954, nevertheless reveals indications that private investment in plant and equipment will be roughly abreast of 1953, with emphasis on resources development and commercial services.

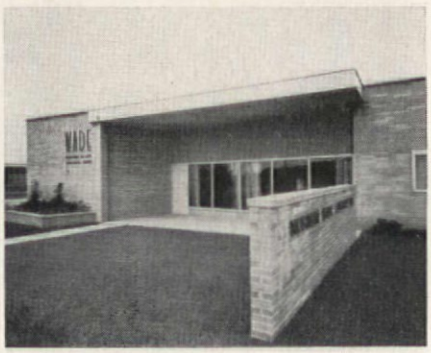
The authoritative *Daily Commercial News and Building Record*, construction industry paper, points out that a comparable survey in the U. S. indicates that first quarter investment there will be nearly six per cent above the 1953 first quarter. More surprising, the *News* comments, is the joint announcement of the U. S. Department of Commerce and the U. S. Securities and Exchange Commission that outlays for new plant and equipment by American business will be at an annual rate of $27,960,000,000 during the first quarter of 1954. This is an annual rate of almost a billion more than was invested in the first quarter of 1953.

Why more spending by business now than in 1952 or 1950? The *News* comments:

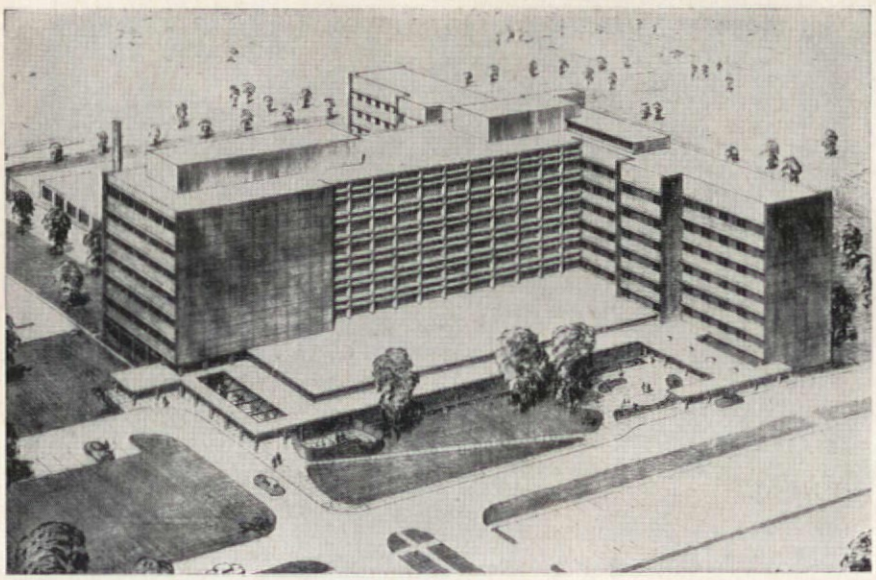
"Some of this spending represents commitments made two or more years ago. Some of it will be pushed to take advantage of quick-amortization grants. Some will be to replace plants and equip-

(*Continued on page 36*)





Two small industrial plants in the Toronto area; Venchiarutti & Venchiarutti, architects. Above: Owatonna Tool Co.; below Norman Wade Co.



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The University Medical School and Teaching Hospital, Jackson, Mississippi, is being equipped with Browne-Morse laboratory equipment, educational furniture and hospital casework. This major installation, typical of today's construction used in medical centers and the most modern hospitals, is reviewed by a feature story in this issue of the Architectural Record.

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PLUMBING WARE DIVISION

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REMEMBER . . .
IF IT'S AN ACTIVE . . .
IT'S ATTRACTIVE!

MR. ARCHITECT:

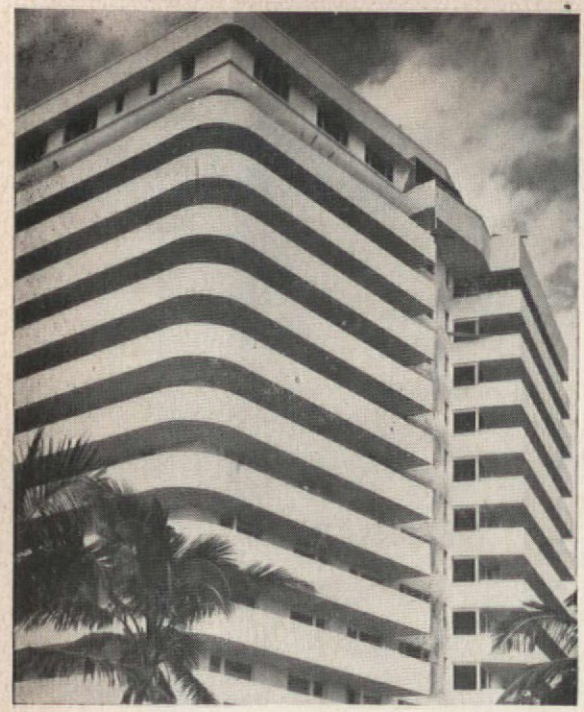
STAINLESS STEEL SINKS

When you "create" your client's home and carefully lay out each detail on paper so that "living" for years to come will be both pleasant and comfortable . . . do you think about the KITCHEN SINK? Here is the one part of the house that the housewife uses the most. Think of her, Sir, and look into ACTIVE STAINLESS STEEL SINKS . . .

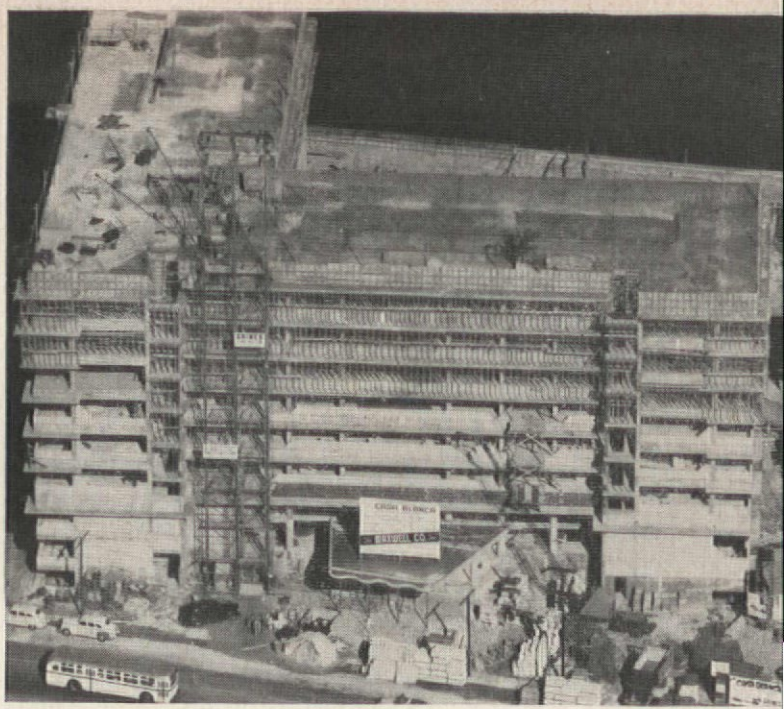
The quality of Stainless Steel is everlasting and Active is proud to announce that once more ACTIVE Stainless Steel is available.

Above is the ever famous model that is now the standard by which any and all Stainless Steel Sinks are measured.

Investigate and we feel sure you'll *specify* and *demand* ACTIVE STAINLESS STEEL from now on. Many models are available — write for your copy of our new catalog.



The 300-room ocean front Sherry-Frontenac Hotel, Miami Beach, towers 13 stories, cost $4 million. Steeltex throughout in floors and roof. Henry Hohauser & Associates, Architects. Cashay Corp., Contractors.



The 9-story Casa Blanca Hotel, Miami Beach, shown here while under construction, is now in operation, cost $2.2 million, has 250 rooms. Steeltex used in all floors and roof. Roy F. France & Son, Architects. Gaines Construction Co., Contractors.

Biscayne Terrace Hotel in downtown Miami has 200 rooms, 10 stories, cost $2 million. 250,000 square feet of Steeltex in floors and roof. Albert Anis and Melvin Grossman, Architects. Edward M. Fleming Construction Co., Contractors.

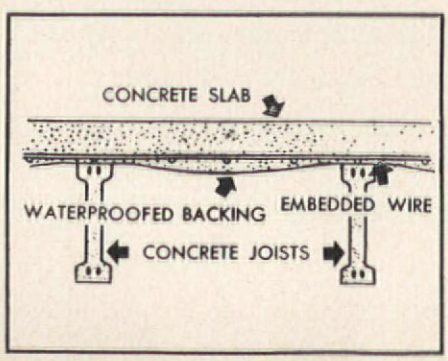
Why STEELTEX® has been the overwhelmi concrete floors in Miami

Southeast Florida is one of the fastest growing regions in the country and Miami Beach has the largest concentration of hotels, motels and apartments of any city in the world—more than 375 hotels containing more than 25,000 rooms and some 1,400 apartment buildings containing 36,000 rooms! Here unusual designs are commonplace, the architect is free to use ideas to his heart's content. People who come to Miami Beach are on vacation, they are free to pick and choose the most modern, most beautiful, most comfortable surroundings for their visit to this vacation paradise!

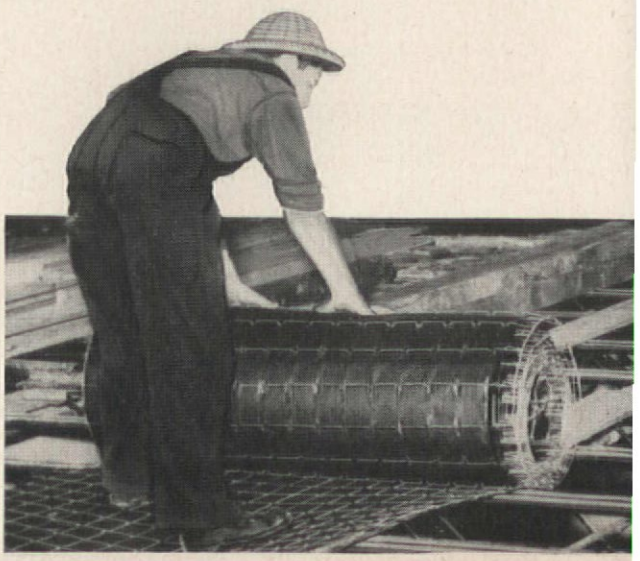
The men who invest their savings in these new buildings want modern design with economy, speed in construction and low maintenance costs in the finished building in order to get a maximum return on their investments.

Concrete, therefore, is the answer and when you use concrete it is only natural to use Steeltex floor lath, the modern, time-and-money-saving, galvanized steel wire reinforcing for concrete which *carries its form on its back* (see cross section below).

Why Steeltex? Steeltex requires no additional forms or reinforc-



NOTE: In the cross section that the weight of the wet concrete forces the backing away, which permits the galvanized steel mesh to assume its proper position in the slab. Steeltex floor lath also performs two other functions: It permits work on the floor below while pouring is in progress and retains moisture to assist proper curing.



A complete vacation resort under one roof, the $3.5 million DiLido Hotel, Miami Beach's newest, opened last Christmas Eve, has 329 rooms, 9 stories, 2 swimming pools, 300 feet of ocean beach, 120 cabañas. Steeltex used in floors and roof. Melvin Grossman and Morris Lapidus, Architects. Robert L. Turchin, Inc., Contractors.

vorite for reinforcing

west hotels and apartments!

ng. It costs less to install than other types of forms and einforcement for concrete because Steeltex can be olled out like a carpet by one man (see photo below). teeltex also saves concrete by minimizing leakage in he freshly poured slab—craftsmen on the floor below an continue working without getting drenched. Steelex insures a strong floor because embedment of steel einforcing takes place automatically (see note below). teeltex allows concrete to cure slowly and properly—uards against excessive cracking—can be installed ver any type of joist—will support ample safe loads om 109 lbs. to 886 lbs. per square foot depending on pacing of joists and thickness of slab. No wonder teeltex is the overwhelming favorite with building deigners in America's favorite winter resort.

Regardless of your locale, be it north, east, south or est, if your building plans call for poured concrete oors, roofs, plaster walls or ceilings or Portland cement Stucco) exteriors, there's a type and kind of Steeltex einforcing that will do the job better, faster, with less ffort at lower overall cost.

See the Steeltex catalog in Sweet's or write for your ee copy of a new 24-page, illustrated booklet "Pittsurgh Steeltex, Backbone of Concrete, Plaster, Mortar."

Algiers Hotel, Miami Beach, cost $1 million, has 8 stories, 200 rooms. Steeltex used in all floors and roof. Henry Hohauser & Associates, Architects. Taylor Construction Co., Contractors.

Prize winning Lanai Apartments, Miami, contains 24 units, took top honors in apartment house class in judging at A.I.A. South Atlantic Regional Conference in Miami last spring. Steeltex used only in second and third floors. Wahl Snyder, Architect. Alonzo Riley, Contractor.

STEELTEX®

manufactured by the

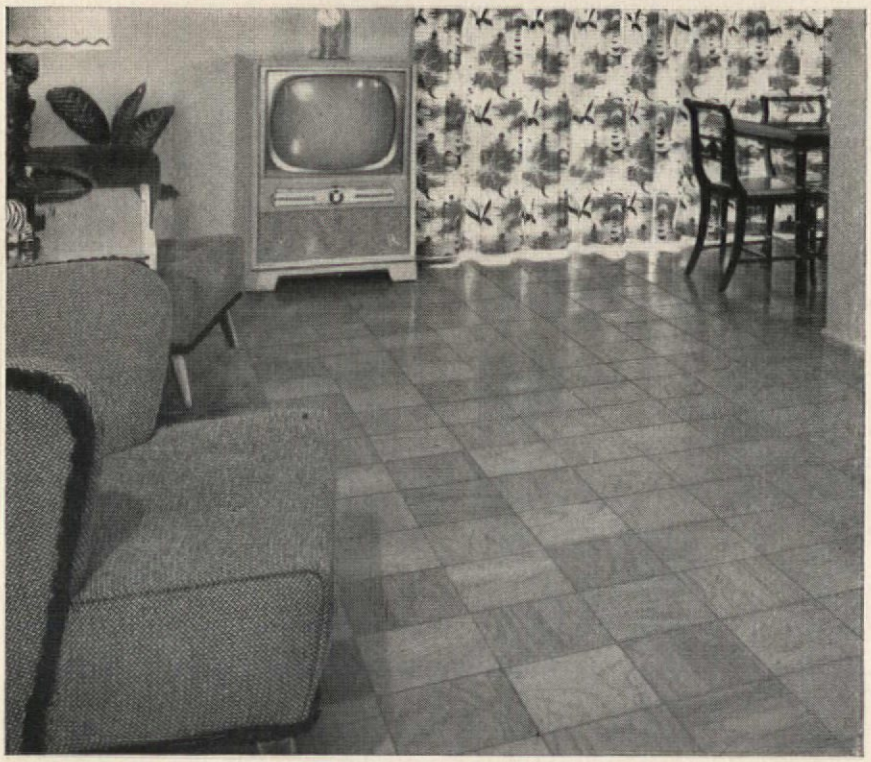
Pittsburgh Steel Products Company

a subsidiary of **Pittsburgh Steel Company**

Pittsburgh 30, Pa.

"It's easier to sell houses from the floor up!"

...that's the beauty of Higgins Block



The Robert P. Gerholz houses in Flint, Michigan, have gained national attention because of their up-to-the-minute design. Right from the first, these houses have featured the up-to-the-minute flooring, Higgins Block. Besides the lustrous, sales-making richness of texture, look at all the other advantages of this flooring:

- 9"x 9" net face hardwood blocks —easy to install
- 3-ply cross-grain construction— when properly installed will not warp, buckle, cup or crack
- Selected oak face—comes with final finish
- Pressure bonded with marine-type glue—water-repellent, climate-proof
- Deep-impregnated with famous "Penta"— rot-proof, termite-proof
- Grooved back anchors into adhesive—quiet and comfortable
- Can be laid *without* special preparation directly on concrete slab—ideal for radiant heat
- Blocks fit flush—*without* large, visible V-grooves

Higgins INC. BONDED HARDWOOD BLOCK FLOORING

THE WORLD-FAMOUS BOAT BUILDERS

Use this coupon for free sample block and literature

Higgins, Inc., Dept. R-34, New Orleans, La.

Gentlemen: Please send sample block and literature to

Firm Name.....

Address.....

City.....Zone.....State.....

CANADA

(*Continued from page 32*)

ment that have worn out in setting production records in the last few years.

"And some of it is the direct result of more intense competition. . . .

"Then again, some businesses may believe that prophets of a decline will be wrong, just as they have every year for the last decade, and that it will be good and profitable to have maximum facilities."

1953 SECOND-BEST YEAR FOR CANADIAN BUILDING

Construction contract awards in 1953 reached a cumulative total of $2 billion, giving Canada its second-best building year, MacLean Building Reports Ltd. reveals. The all-time record year was 1951, with $2.3 billion; the 1952 total was $1.8 billion.

The December award figures, released at the same time, showed a 29.9 per cent increase over December 1952; awards totaled $128,038,700. An upsurge (23.6 per cent) in the residential category was largely responsible, though the industrial category also showed a decided gain (10.1 per cent) and engineering was up slightly (2.5 per cent).

1953 HOUSE COMPLETIONS SET AN ALL-TIME RECORD

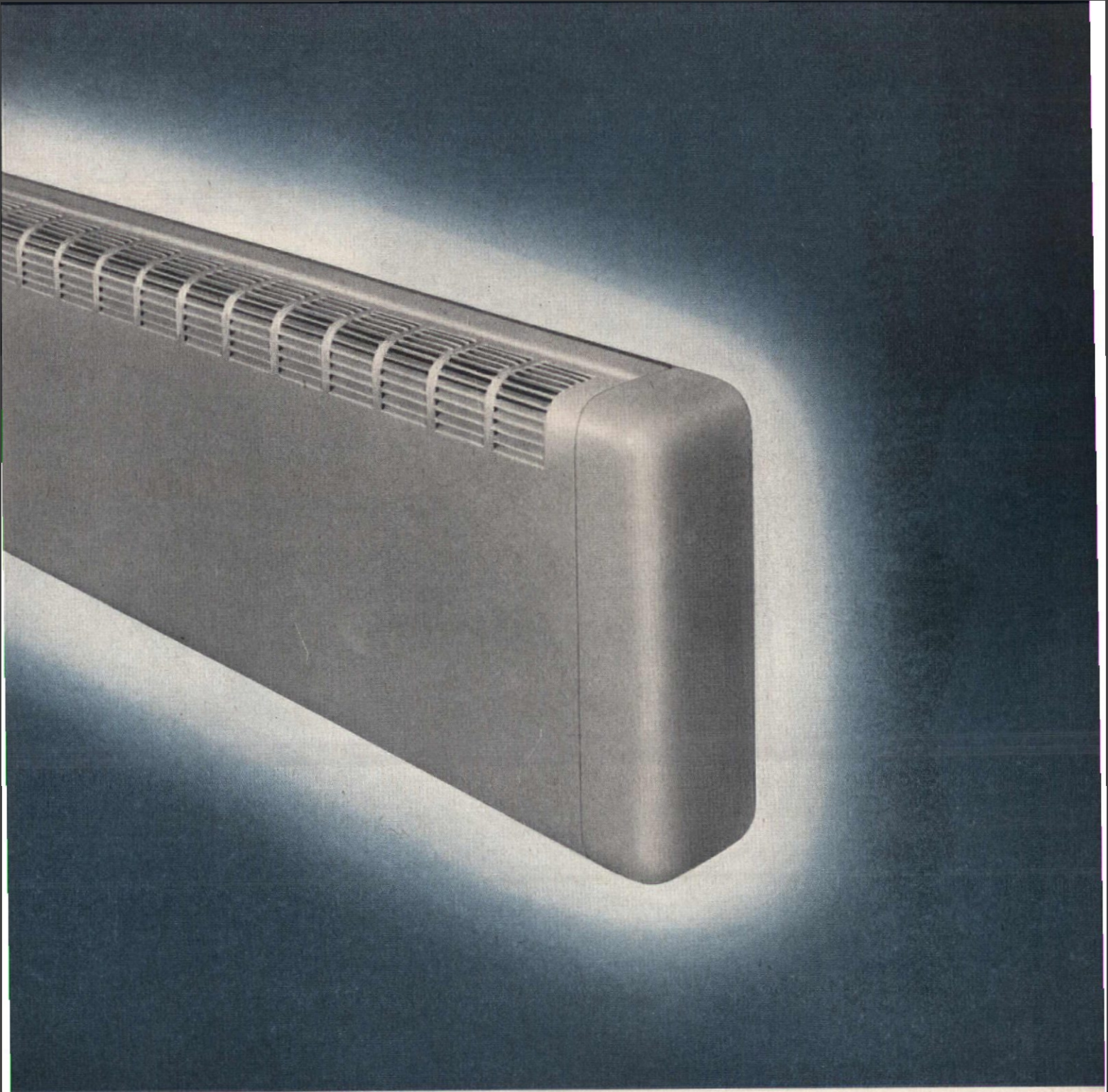
Canada built more houses in 1953 than ever before. While it will be some time before the final figure is known, officials of Central Mortgage & Housing Corporation estimate that completions will total 90,000 to 95,000, including duplexes and apartments.

The previous record of 89,000 completions was set in 1950. In 1951 the total dropped to 81,300 and in 1952 it went down again to 73,000.

According to figures released in the Corporation's *Quarterly Review*, eight per cent of the total dwelling units built in 1953 were two-family and 22 per cent were apartments and row-housing.

However, the *Review* noted, the volume of house building for owner occupancy reached new peaks in the third quarter, with 74 per cent of the houses single-family units.

(*More news on page 38*)



DESIGNED FOR MODERN HEATING

Sill-line will heat the New Pavilion, Jefferson Hospital, Philadelphia, Pa.

Vincent G. Kling, Architect
A. E. D'Ambly, Engineer
W. M. Anderson Co., Htg. Contractor

Nesbitt Sill-line offers you all the benefits of high-capacity wall-fin radiation in the first enclosure expressly styled to harmonize with contemporary building design. Here's quick, uniform, under-the-window perimeter heating that provides economy of operation, ease of installation, and wide flexibility; *plus* an entirely new concept of enclosure styling so desirable for today's institutional and commercial buildings. If you desire further information on this new product, send for Nesbitt Publication 271.

NESBITT SILL-LINE RADIATION

Made and sold by John J. Nesbitt, Inc., Philadelphia 36, Pa.

By Ernest Mickel

HOUSING BILLS REFLECT ADVISORY GROUP REPORT

REACTION FROM THE HOME BUILDING industry to introduction of identical new housing bills in the House and Senate last month was immediate and favorable. The National Association of Home Builders, through its new president, R. G. ("Dick") Hughes, said it was in accord with principles and objectives of the legislation, though some changes would "be essential" to achieve the President's goals.

The measures introduced by Sen. Homer Capehart (R-Ind.), and Rep. Jesse Wolcott (R-Mich.), chairmen of the Banking committees, sought to translate into a Federal government program the bulk of the major recommendations made in the December report of the President's Advisory Committee on Housing Policies and Programs (ARCHITECTURAL RECORD, Jan. 1954, page 16). There was only slight deviation in the bills themselves from the general policies laid down in Mr. Eisenhower's special message on housing, which Congress had received January 25.

Public Housing: No Level Set

Avoiding any specifics on numbers of public low-rent housing units to be built, the bills extend some preference in public housing to those displaced by code enforcement, closing of structures, highway construction, etc. Rep. Wolcott is said to have convinced the Administration that there was no need for specifying the number of public housing units in the current legislation since sufficient authority for construction already exists in previous laws. The President was expected to seek a limitation on these units through the appropriations committees.

One important aspect of the new measures was discretionary authority under which the President would set interest rates on VA and FHA loans, the maximum not to exceed the average market yield on long term government bonds plus 2.5 per cent. Also included was authority for FHA to "open-end" mortgages, permitting the borrower to obtain more favorable financing for repair and renovation. This could swing open the gates on the vast potential of the "fix-up" market which industry has been estimating in billions per year.

New Life for FNMA

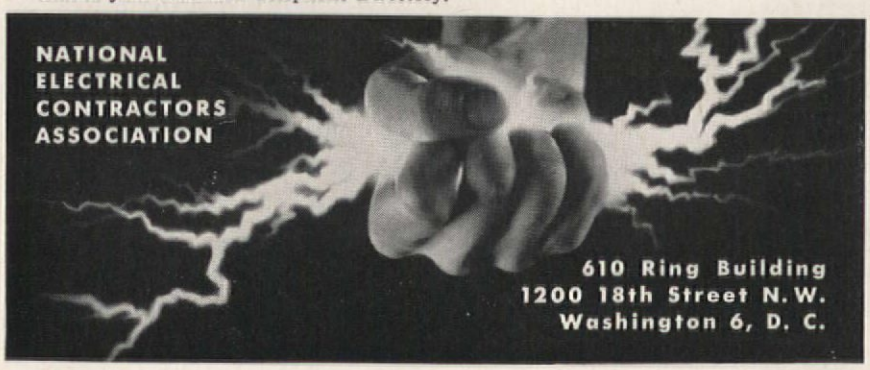
Congress was expected to squabble as much over the secondary market changes proposed by Capehart and Wolcott as over any other single issue. Unlike the report of the President's advisory committee, which advised liquidation of the government-financed Federal National Mortgage Association, the bills aimed at establishing a reincorporated secondary market operation with three functions: (1) to operate as a true secondary mortgage market; (2) to provide financial assistance for special housing programs; and (3) to bring about orderly liquidation of the mortgages acquired by the present Federal National Mortgage Association. Thus a new "Fannie Mae" would replace the old.

(*Continued on page 294*)

The seal and the letters – NECA – stand for the National Electrical Contractors Association. Any electrical contractor qualifying for association membership can offer the architect or engineer:

1. **A GUARANTEE,** in writing, covering parts *and* workmanship.
2. **INTERPRETIVE ENGINEERING** – on-the-job interpretation of your plans – accurately, practically, to produce the results you expect.
3. **TRAINED MANPOWER** – an adequate pool of craftsmen, thoroughly trained from apprenticeship up, to handle any size job.
4. **COMPETENT SUPERVISION,** by men who know electrical products, practices, standards and codes.

These factors and more mean protection of your ideas, your plans, your prestige. Why not discuss your next job with your Qualified NECA Contractor? You'll find his name under the NECA Seal in your Classified Telephone Directory.



NOW...

one nurse can do the work of two

WITH THE NEW "VOKALCALL" AUDIO-VISUAL NURSES' CALL SYSTEM

The new "VOKALCALL" now combines in one nurses' call system all the advantages of natural two-way voice communication between patient and nurse, with all the advantages of the time-tested method of utilizing visual and audible signals to call the nurse. With "Vokalcall" the nurse can talk directly to patients without leaving her station, thereby saving herself countless unnecessary trips to bedsides. With "Vokalcall" the nurse can cancel all visual signals originated by patients' calls at *either* her control station or at patients' bedsides. With "Vokalcall" the nurse can "listen in" to each room at any time (with patient's permission) without leaving her station and without disturbance to anyone.

"Vokalcall" doubles the nurse's effectiveness through saved footsteps, ability to attend more patients, greater concentration on direct bedside care, and increased morale and feeling of accomplishment.

Patients like "Vokalcall" too. They benefit from a feeling of security and their needs are known sooner and met faster. To hospitals the tremendous advantage of greater service, reduced operating costs, and increased goodwill are obvious.

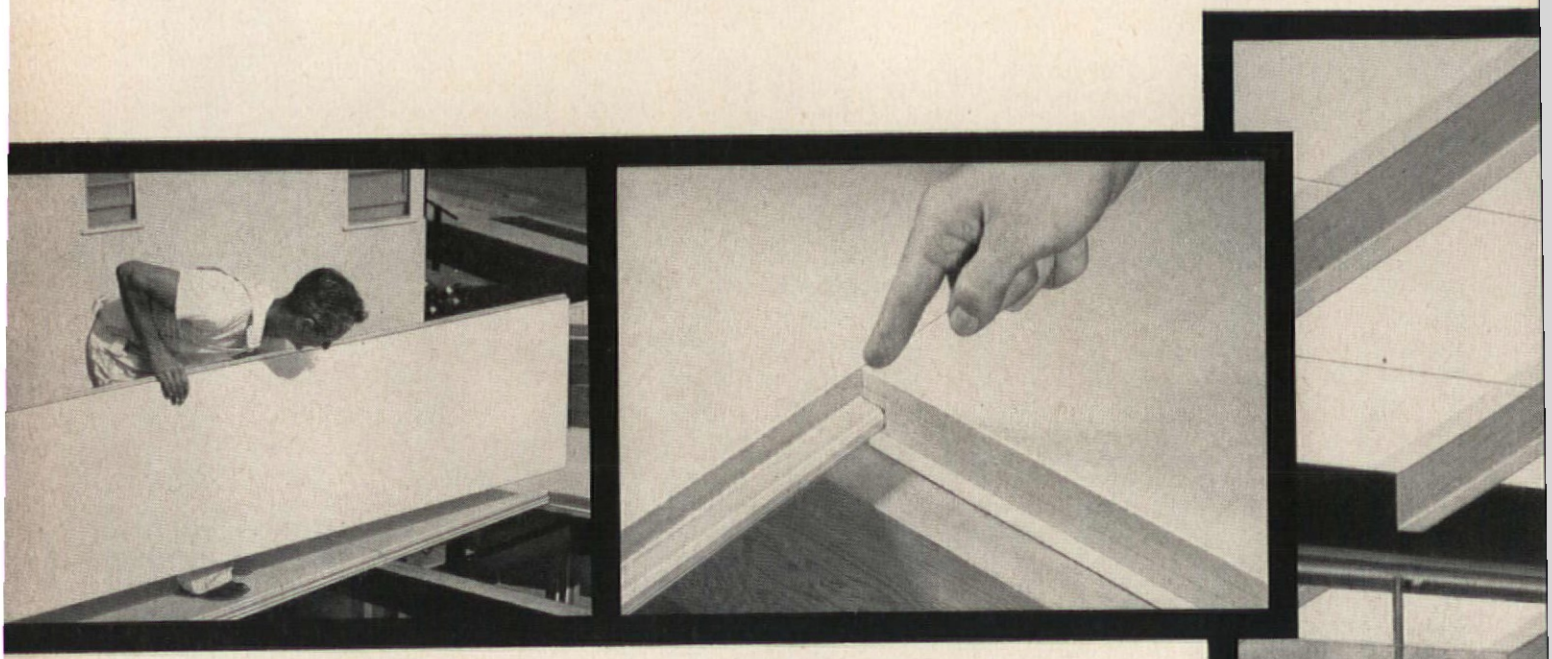
SINCE 1892 AUTH

A new booklet entitled "VOKALCALL" tells the whole story. Write:

AUTH ELECTRIC CO., Inc.

34-20 45th STREET, LONG ISLAND CITY 1, NEW YORK.

Now build exposed beam new 3 in 1 Roof Deck and



1. It's Roof Deck...

Cuts application time as much as 45% or more. Only one material to handle instead of several. New Roof Deck eliminates need for separate roof boards, insulation, lath, plaster and ceiling finishing. In roof sheathing time alone, Roof Deck can save 12 man-hours per thousand sq. ft. of surface compared with 2" x 6" D&M roof sheathing.

2. It's Insulation...

2" and 3" thicknesses meet F.H.A. "U" requirements. Inch for inch, Roof Deck provides more than twice the insulation value of wood. 2" Insulite Roof Deck, for example, is comparable to 2" wood deck plus 1" fiberboard insulation. Helps absorb sound, too. Exclusive vapor barrier protects against condensation.

3. And Finished Ceiling!

The underside of Insulite Roof Deck is finished with a white flame-resistant surface at the factory. Simply lay Roof Deck over pre-finished beams and the ceiling is done. No need to plaster, paint, stain or wax. Reduces labor and material costs. Insulite Roof Deck is available in 2' x 8' units, 1½", 2" and 3" thick with or without Insulite's exclusive vapor barrier.

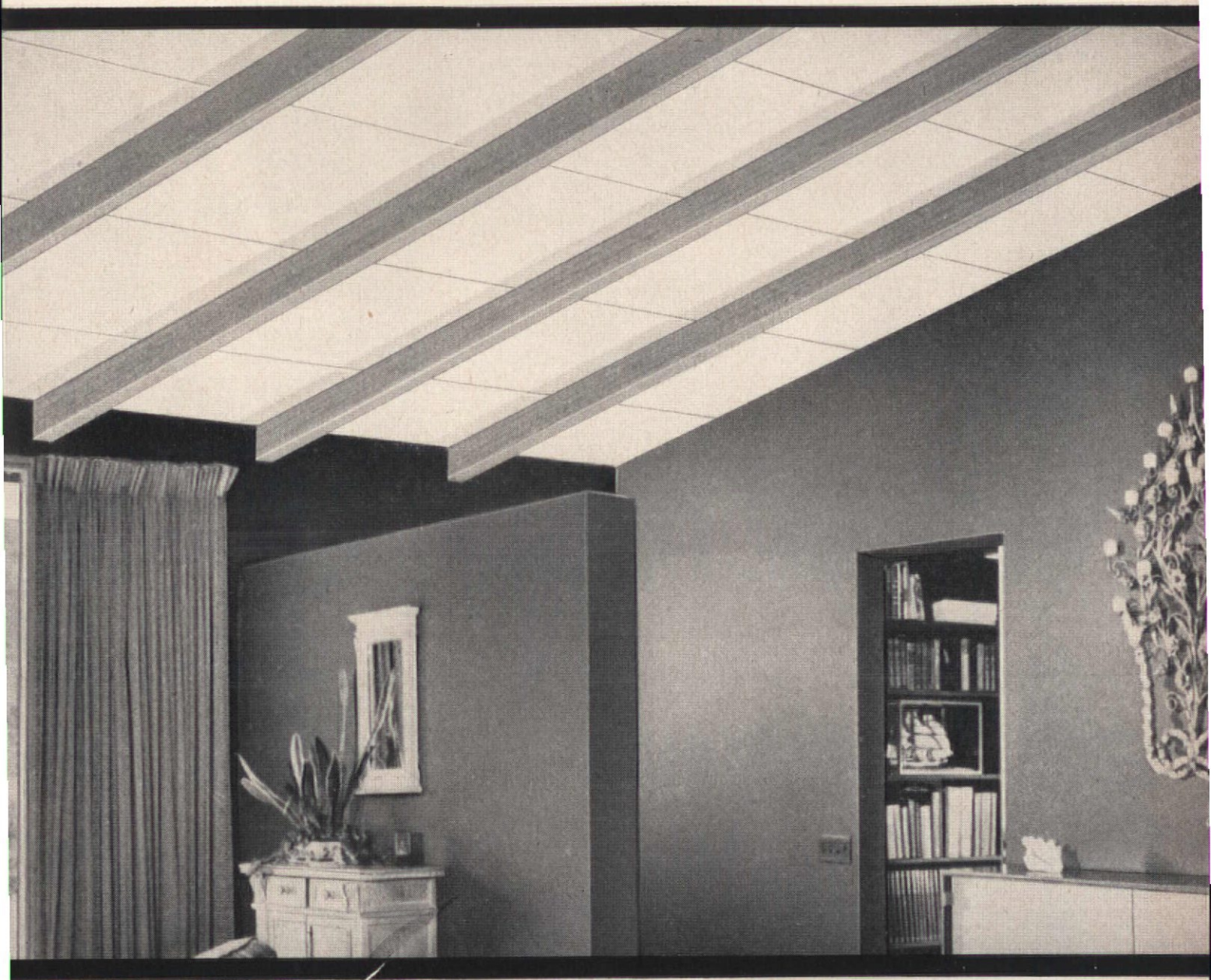
Now! Roof Deck, Insulation and Finished Ceiling

in one quick money-saving operation with new

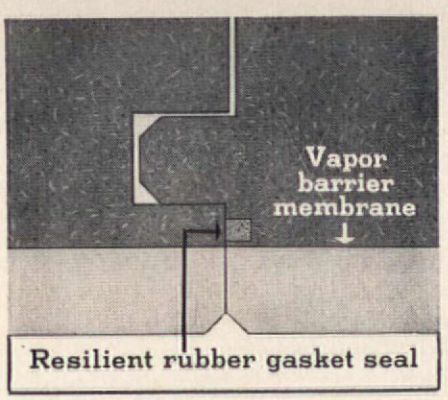
INSULITE

Roof Deck

ceilings anywhere with save $80 to $300 a home!



The secret's in the seal! Exclusive vapor barrier lets you build exposed beam ceilings for less, anywhere in the U.S.A. Continuous vapor barrier combines (1) a membrane laminated into each unit, plus (2) a rubber gasket that seals carefully machined T&G joints. Protects against condensation within the deck in any climate. (Also available without vapor barrier for use in moderate climates.)



Send for Complete Information Now! Actual on-the-job pictures and construction details show how to use new Insulite Roof Deck to build better for less. Write Insulite, Minneapolis 2, Minnesota.

INSULITE DIVISION, Minnesota and Ontario Paper Company, Minneapolis 2, Minnesota

INSULITE IS A REGISTERED TRADE MARK

CONSTRUCTION COST INDEXES

Labor and Materials

United States average 1926–1929 = 100

Presented by Clyde Shute, manager, Statistical and Research Division, F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

NEW YORK

Period	Residential Brick	Residential Frame	Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Steel
1930	127.0	126.7	124.1	128.0	123.6
1935	93.8	91.3	104.7	108.5	105.5
1939	123.5	122.4	130.7	133.4	130.1
1940	126.3	125.1	132.2	135.1	131.4
1946	181.8	182.4	177.2	179.0	174.8
1947	219.3	222.0	207.6	207.5	203.8
1948	250.1	251.6	239.4	242.2	235.6
1949	243.7	240.8	242.8	246.4	240.0
1950	256.2	254.5	249.5	251.5	248.0
1951	273.2	271.3	263.7	265.2	262.2
1952	278.2	274.8	271.9	274.9	271.8
Oct. 1953	283.0	277.3	288.0	295.0	290.8
Nov. 1953	283.2	277.5	288.3	295.2	291.0
Dec. 1953	286.1	280.6	292.6	298.5	295.2
	% increase over 1939				
Dec. 1953	**131.7**	**129.2**	**123.9**	**123.8**	**126.9**

ATLANTA

Period	Residential Brick	Residential Frame	Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Steel
1930	82.1	80.9	84.5	86.1	83.6
1935	72.3	67.9	84.0	87.1	85.1
1939	86.3	83.1	95.1	97.4	94.7
1940	91.0	89.0	96.9	98.5	97.5
1946	148.1	149.2	136.8	136.4	135.1
1947	180.4	184.0	158.1	157.1	158.0
1948	199.2	202.5	178.8	178.8	178.8
1949	189.3	189.9	180.6	180.8	177.5
1950	194.3	196.2	185.4	183.7	185.0
1951	212.8	214.6	204.2	202.8	205.0
1952	218.8	221.0	212.8	210.1	214.3
Oct. 1953	224.9	225.6	225.7	226.7	226.8
Nov. 1953	225.1	225.8	226.0	226.9	227.0
Dec. 1953	223.7	224.1	225.7	226.7	226.6
	% increase over 1939				
Dec. 1953	**159.2**	**169.7**	**137.3**	**132.8**	**139.3**

ST. LOUIS

1930	108.9	108.3	112.4	115.3	111.3
1935	95.1	90.1	104.1	108.3	105.4
1939	110.2	107.0	118.7	119.8	119.0
1940	112.6	110.1	119.3	120.3	119.4
1946	167.1	167.4	159.1	161.1	158.1
1947	202.4	203.8	183.9	184.2	184.0
1948	227.9	231.2	207.7	210.0	208.1
1949	221.4	220.7	212.8	215.7	213.6
1950	232.8	230.7	221.9	225.3	222.8
1951	252.0	248.3	238.5	240.9	239.0
1952	259.1	253.2	249.7	255.0	249.6
Oct. 1953	265.4	259.2	261.9	270.6	263.6
Nov. 1953	266.4	260.0	263.3	272.0	264.8
Dec. 1953	265.8	259.3	263.2	271.9	264.7
	% increase over 1939				
Dec. 1953	**141.2**	**142.3**	**121.7**	**127.0**	**122.4**

SAN FRANCISCO

1930	90.8	86.8	100.4	104.9	100.4
1935	89.5	84.5	96.4	103.7	99.7
1939	105.6	99.3	117.4	121.9	116.5
1940	106.4	101.2	116.3	120.1	115.5
1946	159.7	157.5	157.9	159.3	160.0
1947	193.1	191.6	183.7	186.8	186.9
1948	218.9	216.6	208.3	214.7	211.1
1949	213.0	207.1	214.0	219.8	216.1
1950	227.0	223.1	222.4	224.5	222.6
1951	245.2	240.4	239.6	243.1	243.1
1952	250.2	245.0	245.6	248.7	249.6
Oct. 1953	258.7	251.3	263.8	270.7	266.1
Nov. 1953	257.9	250.1	264.3	271.1	266.3
Dec. 1953	258.6	251.0	264.4	271.2	266.5
	% increase over 1939				
Dec. 1953	**144.9**	**152.8**	**125.2**	**122.5**	**128.8**

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926–29 for that particular type — considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110
index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926–29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear regularly on this page.

NEW Pella® FOLDING DOORS IN Natural WOOD

HOW CAN YOU USE Pella Wood Folding Doors to provide privacy and maximum utility of space? Specify as folding partitions between living-bedroom-den combinations. Use them between living-dining and kitchen-dining areas. Use them in regular door openings wherever inside closures are required.

Install across entire closet fronts. Create double-purpose rooms in schools, churches, hospitals, clubs and other buildings. Pella Doors fold accordion-like against door jambs or walls. Every inch of floor and wall space can be used.

Pella *natural wood* doors are solidly built. Laminated construction assures straight, true panels. Color and texture blend with furniture and woodwork. Stock doors in pine, finished or unfinished. Custom doors in natural pine, oak, mahogany or birch, clear varnished or unfinished. Packaged, complete with all hardware and concealing track mould. See Pella catalog in Sweet's Architectural File or mail coupon below.

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WOOD CASEMENTS • MULTI-PURPOSE WINDOWS

ROLSCREENS • VENETIAN BLINDS

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ROLSCREEN COMPANY
Dept. F-33, Pella, Iowa

GENTLEMEN: Please send FREE literature on Pella Wood Folding Doors.

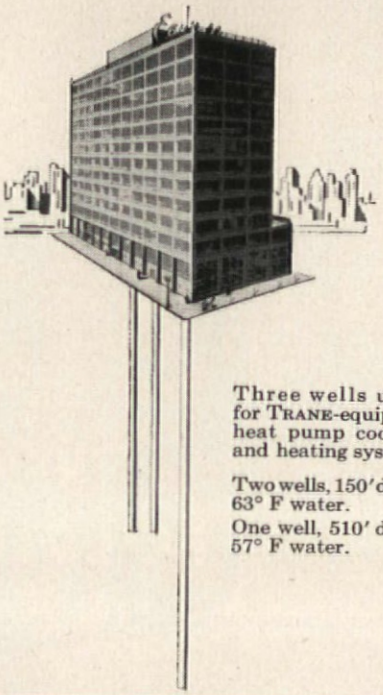
NAME

ADDRESS

CITY & ZONE STATE

Trane heat pump sets

Engineers of Portland's 12-story provides heat for only 16%



Three wells used for TRANE-equipped heat pump cooling and heating system.

Two wells, 150′ deep, 63° F water.

One well, 510′ deep, 57° F water.

Trane CenTraVac, refrigeration compressor from 50 to 400 tons, is ideal for heat pump or standard cooling jobs. *Cuts power* costs, automatically adjusts to load from 10% to 100% capacity. *Saves labor*—no attendant needed. *Simplifies installation*—no special base or sound-proofing required.

one source

new economy record!

Equitable building report heat pump of district steam costs!

- If district steam had been used for heating, total year-'round *heating-cooling* costs would have been *64% greater.*
- A total of 37% of the entire heating need was met with *"by-product"* heat —heat salvaged from the cooling process during those periods when heating and cooling were both required.
- Combined heating and cooling costs were 11.3 cents per sq. ft. (*less than half* the average for air conditioned office buildings in the U.S.)

These are findings reported by the installation's designer, J. Donald Kroeker, consulting engineer—as taken from a recent report to the A.S.H.V.E. and published in the November, 1953, issue of Heating, Piping & Air Conditioning.

This outstanding economy record was set by a 540-ton year-'round heat pump. A complete TRANE installation, including 4 hermetic centrifugal compressors, fans, coils and circulators.

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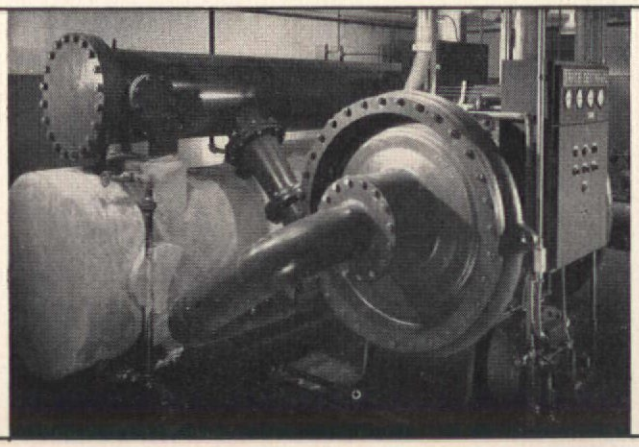

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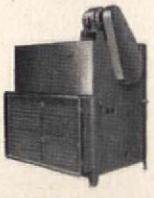

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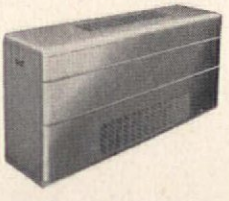

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MACKINTOSH AND ART NOUVEAU

Charles Rennie Mackintosh and the Modern Movement. By Thomas Howarth. Wittenborn (New York, N. Y.) 1953. 7½ by 10 in. 329 pp. illus.

VINCENT J. SCULLY

Department of the History of Art and Architecture, Yale University.

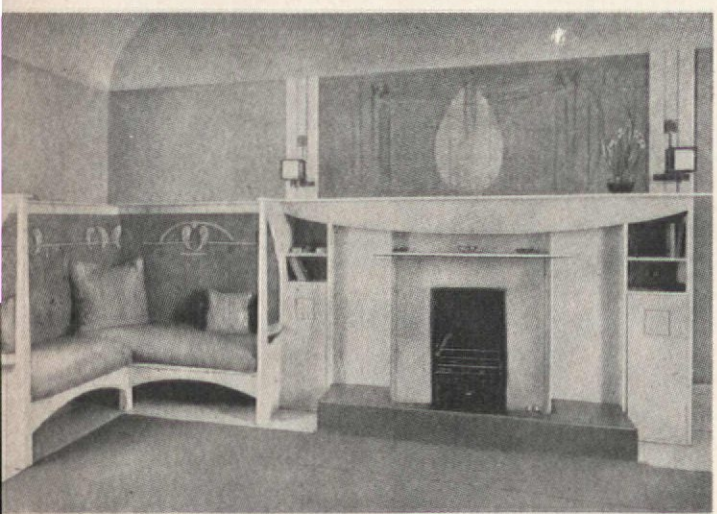
Charles Rennie Mackintosh, 1868–1928, has certainly, as the author of this disarming book states in his preface, remained one of the most "enigmatic" figures in the development of modern architecture. The importance of his Glasgow School of Art, of 1877–99 and 1907–09, has long been recognized by historians of the modern movement. The only other works of his which have been generally known are a few tea rooms, several houses and one or two unrealized projects. Yet upon this small body of evidence architects and historians of the past generation have reached two vaguely formulated conclusions: 1) that Mackintosh was the last and possibly the greatest of the distinguished line of British architects and designers which had been in the forefront of architectural advance throughout the nineteenth century but which had, strangely enough, petered out before 1910; and 2) that Mackintosh's work must have had considerable influence upon the development of modern architecture on the Continent.

In view of these preliminary conclusions, it would seem that the objectives which Mr. Howarth has set himself in his study are the right ones. He has, first of all, attempted to present the whole of Mackintosh's work, in documented form and with excellent photographs. It is obvious that the research involved in this attempt was a labor of love for Mr. Howarth, and it has been eminently successful. The work of Mackintosh can now be seen in its entirety for the first time, and this is important. Some of his early interiors, for example, not reproduced in any modern work, will be a revelation to contemporary architects and historians in their elegance, their clarity and their inspired simplicity. Still the volume of work as a whole remains tragically small, and nothing of any importance appears after the second program of building at the Glasgow School of Art.

In his other objectives Mr. Howarth has possibly been less successful. In presenting Mackintosh's work and the tradition out of which it grew, Mr. Howarth has organized his material in a way which is rather difficult for the reader and in which some sense of important chronological connection and formal development is lost. He begins by discussing the Scottish tradition in building and the architects who were practicing in Glasgow during the nineties. Next he considers Mackintosh's architecture and interior design in great detail but without chronological sequence. Only in a later section does he discuss the earlier work of Webb, Shaw, MacMurde and Voysey. Yet without a knowledge of these architects' experiments one can hardly be felt to understand the full tradition of nineteenth century British architecture out of which Mackintosh developed. His tradition was certainly not simply a Scottish one, as the author earlier, though I am sure unintentionally, might have led us to believe. Similarly, the *art nouveau* elements in the earliest designs of Mackintosh and his wife remain unrelated to their sources in Morris, Japanese prints and Aubrey Beardsley until a much later section of the book.

If Mr. Howarth thus does not fully succeed in clearly establishing the relationship of Mackintosh to his tradition, he similarly has some difficulty in presenting a coherent picture of the position of Mackintosh in relation to, and his effect upon, contemporary and later developments on the Continent. There are probably two reasons for this. The first is implicit in the material itself: the fact that even after Mr. Howarth's researches the production of Mackintosh remains thin and, to all intents and purposes, ceases after 1909. This problem is clearly recognized by the author himself, and he is to be congratulated for his admirable restraint in common among biographers, in not claiming more for his subject than the facts themselves warrant. The second reason lies deeper and has, up to now, infected many studies of *Art Nouveau*, including the rather fragmentary section of Mr. Howarth's book which deals with the problem. This reason lies in judging the importance of *Art Nouveau* forms according to the standards of the later "International Style." That is to say, International Style rectangularity is taken as the expressive and rational norm of modern architecture. Therefore *Art Nouveau* curvilinearity is taken as irrational and without important meaning for the future. Giedion's *Space, Time and Architecture* did much to set up this standard and, as he himself notes, Mr. Howarth's attitudes toward the devel-

(Continued on page 48)



Interior by Mackintosh from *Charles Rennie Mackintosh and the Modern Movement* By Thomas Howarth

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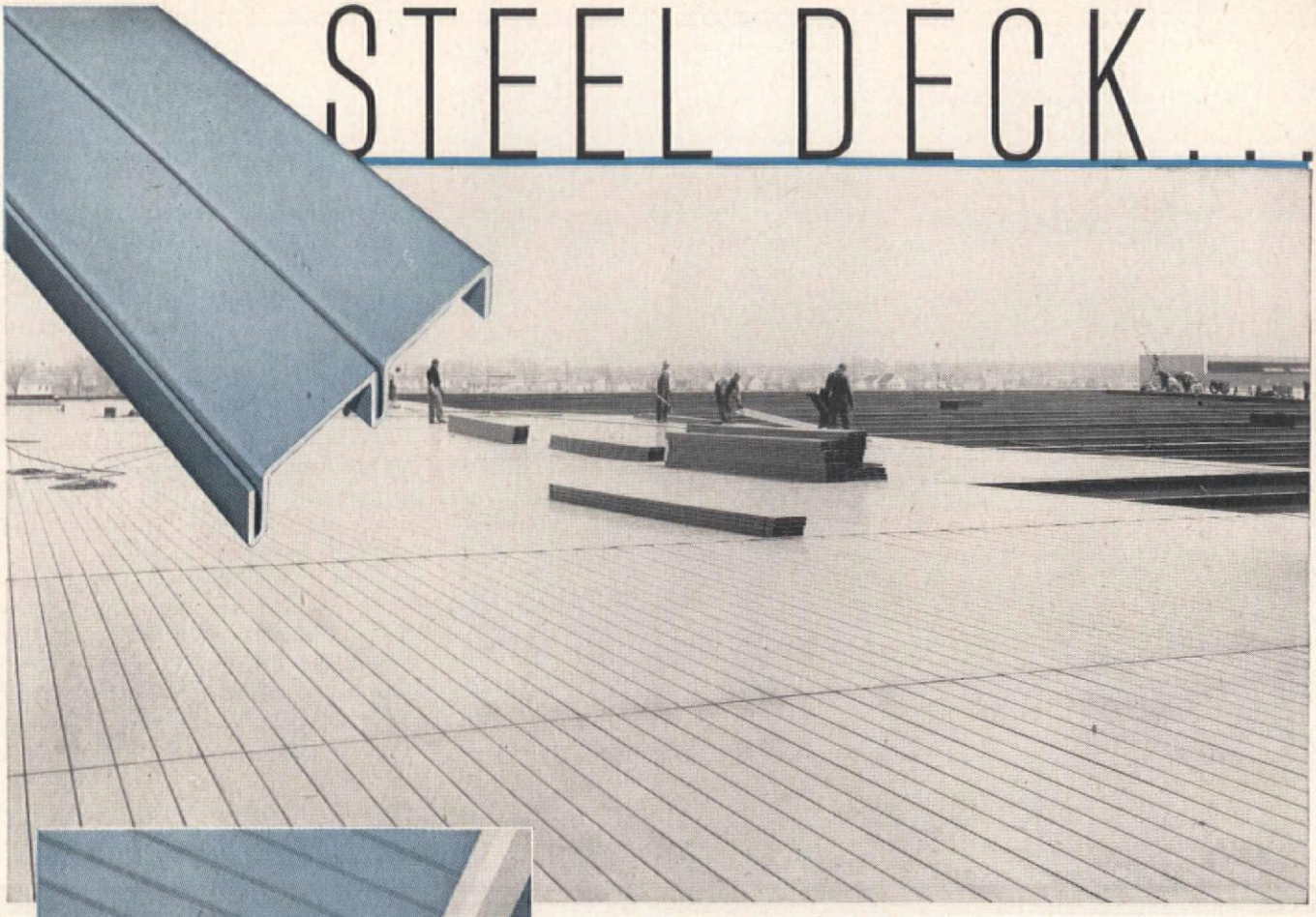

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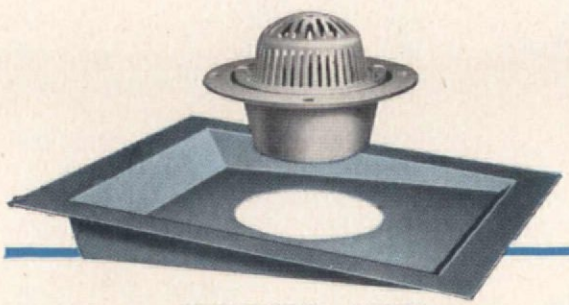

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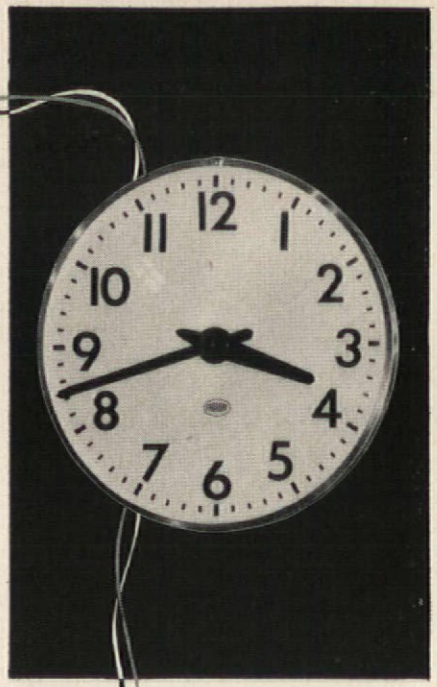

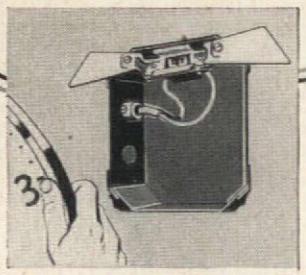

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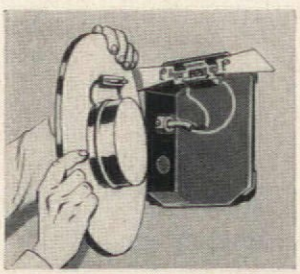

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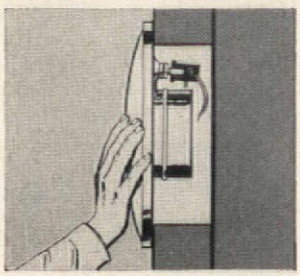

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REQUIRED READING

(*Continued from page 46*)

opment of the twentieth century architecture are largely based on those of Giedion. Yet the standard is undoubtedly a faulty one, and it would be refreshing and perhaps of considerable importance if those historians who are now once more studying *Art Nouveau* would set up a counter standard. It might be something like this: Spatial and structural continuities are, in actual fact, the unique potentials of twentieth century building. Concrete, for example, is by its nature a monolith in which the forces are continuous throughout the shell. Moreover, the pattern of the moment of bending in structures can be shown to be curvilinear. Thus, curvilinear continuities, in which discontinuous differentiation between load and support no longer has meaning, would seem to hold intrinsic possibilities for modern building. Toward these possibilities the whipping, continuous curves of beam and lintel in Horta, the sinuous iron work brackets of Mackintosh, and the undulating walls of Gaudi would seem to have been groping. Certainly they are closer to such possibilities — at least emotionally and plastically — than is the concrete expressed as discontinuous timber work of Perret or the rectangular planarity of Gropius and Mies. Thus *Art Nouveau* would no longer need to be apologized for, and its importance in relation to a long future, in which the International Style might be felt to be only one of many interludes, might be established.

Mr. Howarth's book, like many English publications, could also have been strengthened by a firmer knowledge of contemporary events in America. Mackintosh's tensile interweaving of skeletal elements in his interiors, especially in the library of 1907–1908 in the Glasgow School of Art, should be related to the earlier skeletal interweavings of Stanford White in 1880 (McCormick and Appleton Houses and the Newport Casino), Louis Sullivan in 1890 and 1895 (Wainwright and Guaranty Buildings), Frank Lloyd Wright in 1902, 1904 and 1906 (Willitts House, Larkin Building and Unity Temple). Here again a profound and international principle of structural and visual interweaving, easily of importance beyond the International Style, would seem to have been at work in the late nineteenth and early twentieth centuries. (A minor point in this connec-

(*Continued on page 332*)

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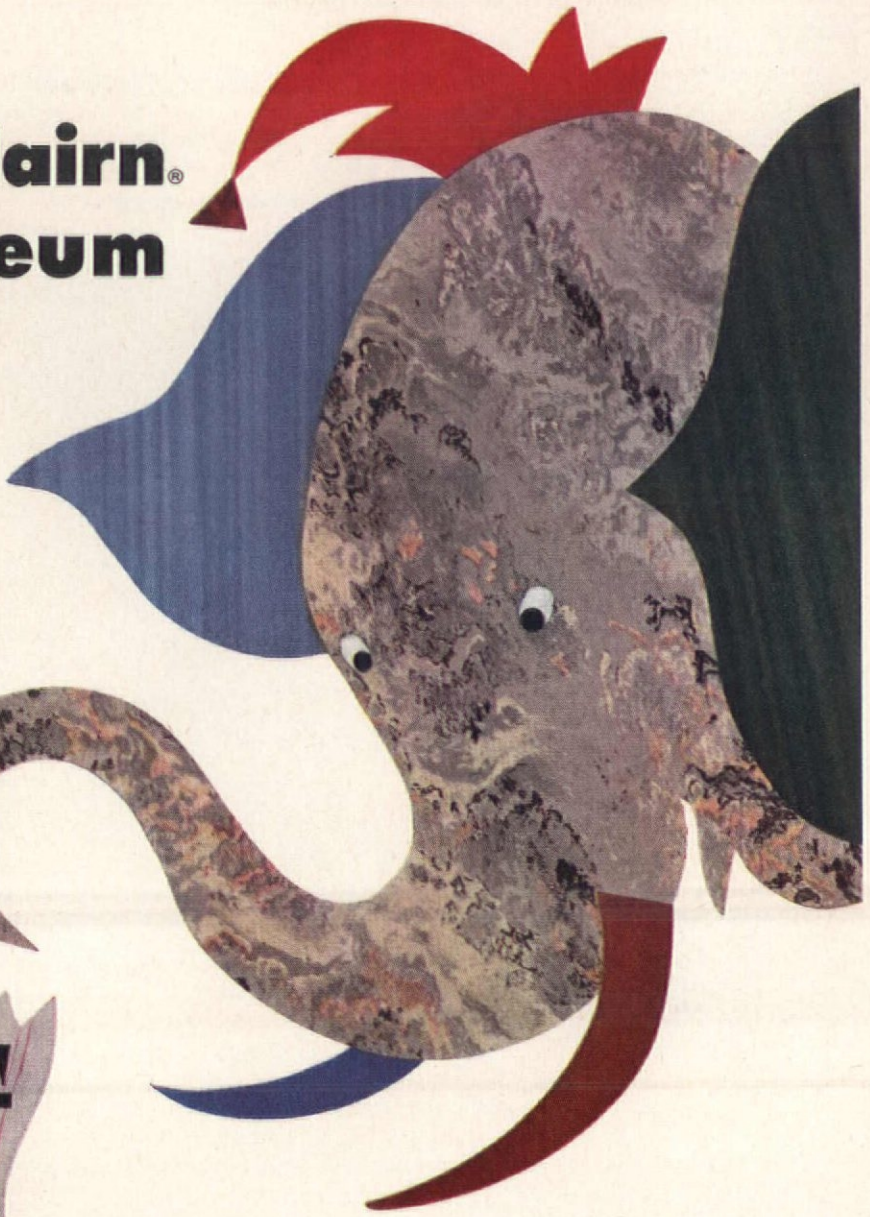

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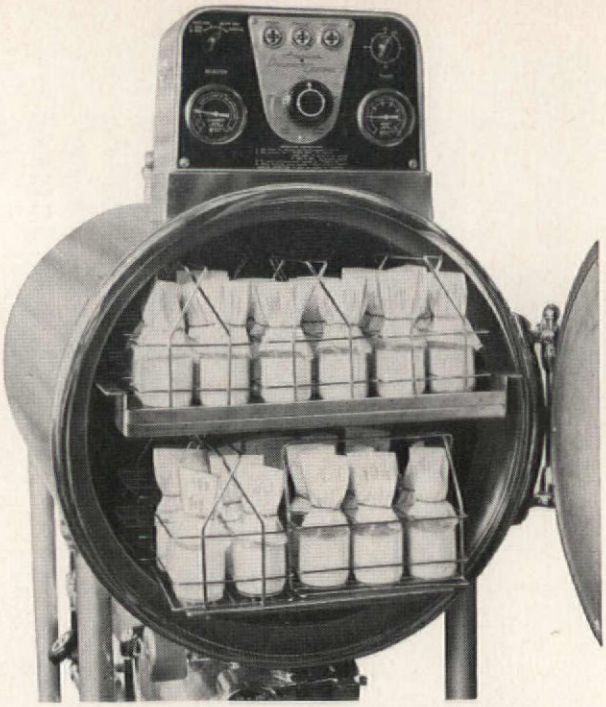

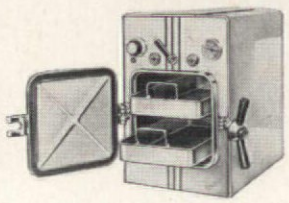

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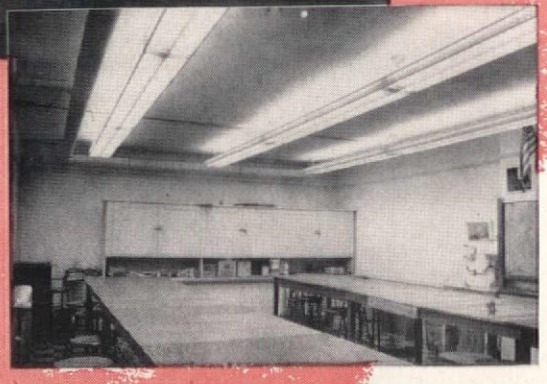

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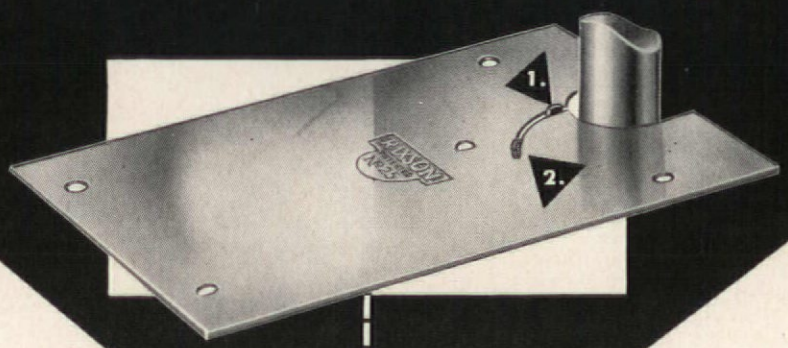

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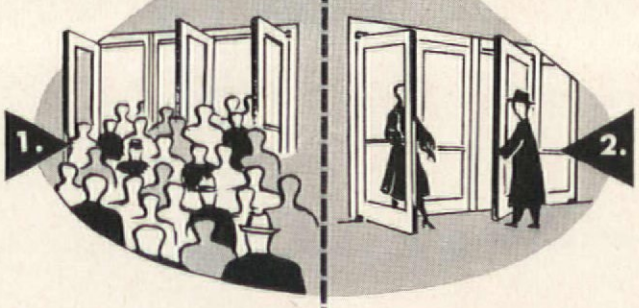

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To build the best possible concrete-block walls, the bricklayer must use plastic mortar. The mortar must be plastic enough to stick to the long head joint. It must not drop off when the mortared edges of the block are swung to a vertical position and lowered into place. It must be plastic enough to enable the bricklayer to quickly and accurately tap the block down to the line.

Brixment mortar provides this necessary plasticity. Moreover, it stays soft and plastic long enough to let the bricklayer level, plumb and straighten the unit and adjust it to its final position in the wall before the mortar stiffens.

Brighton City Hall, Brighton, Colorado

Architect: James M. Hunter, A. I. A., Boulder, Colorado

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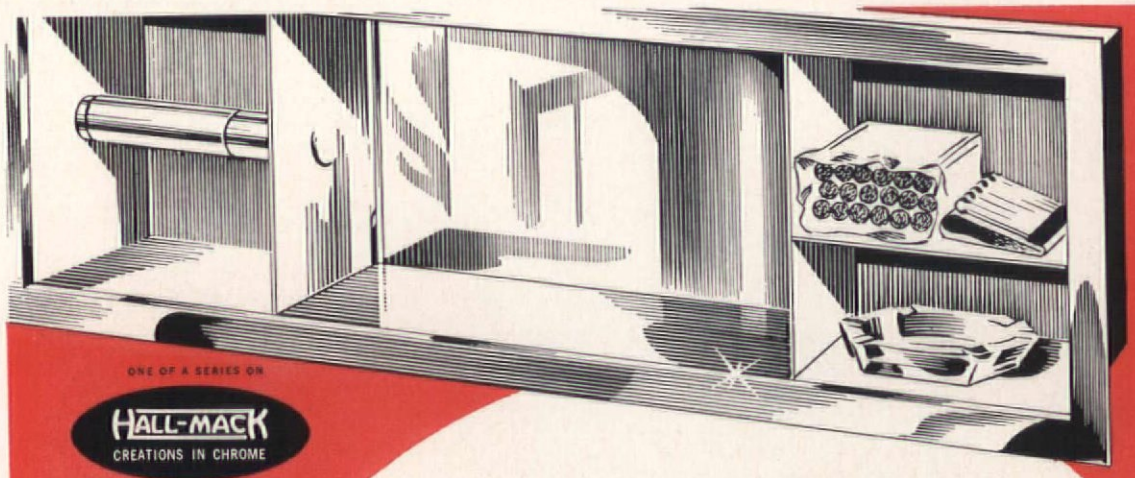

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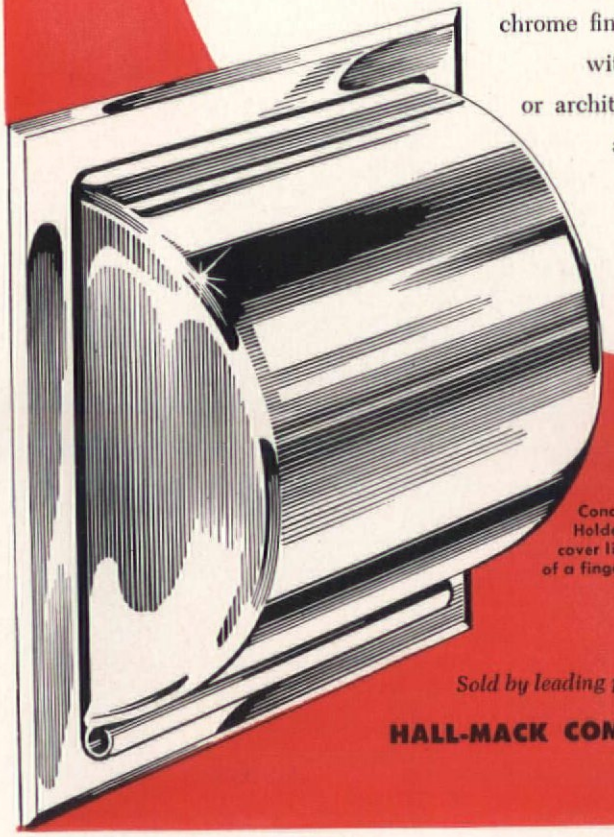

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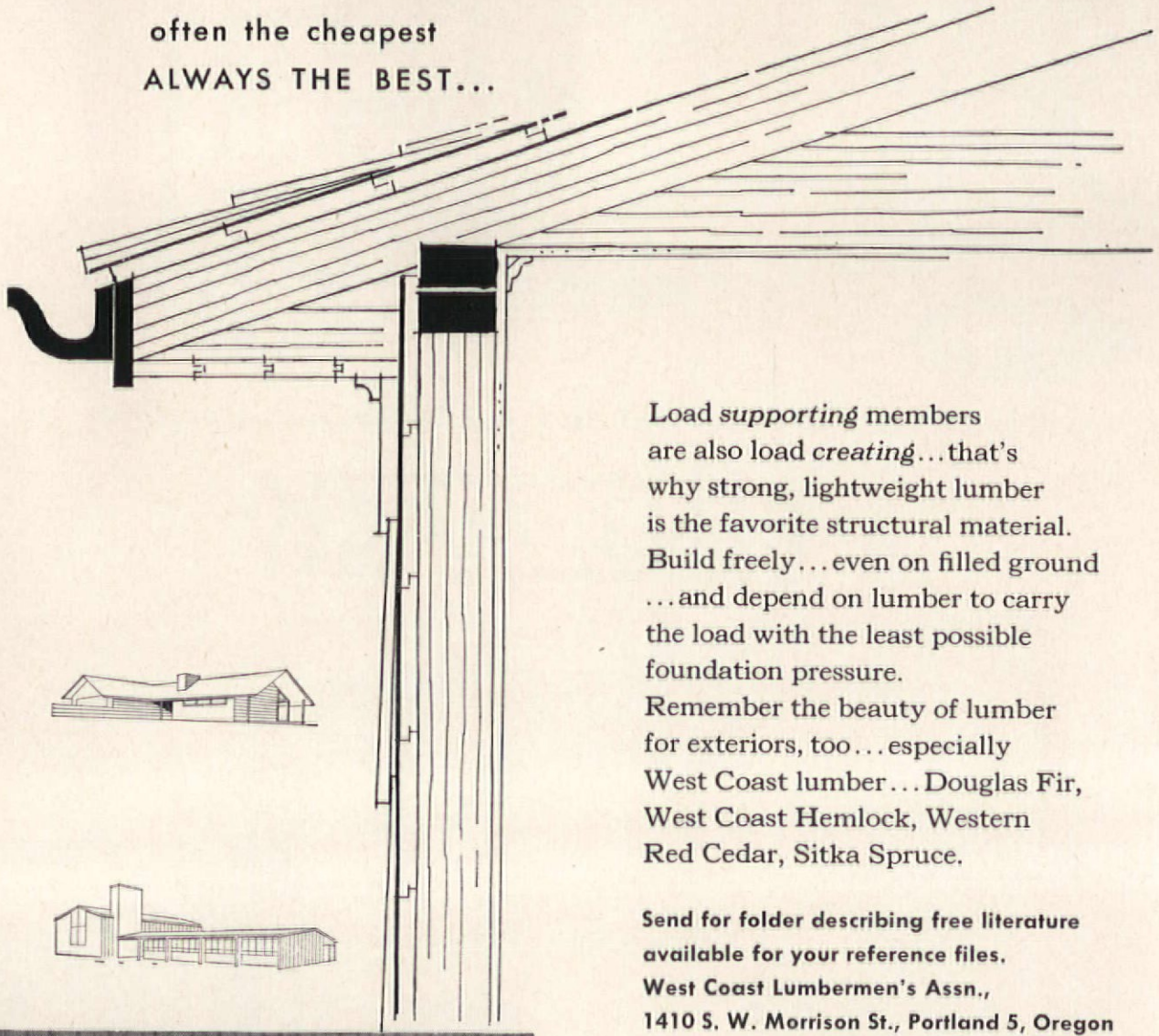

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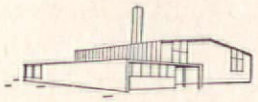

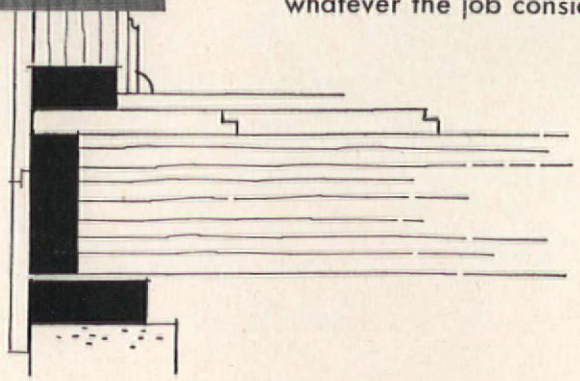

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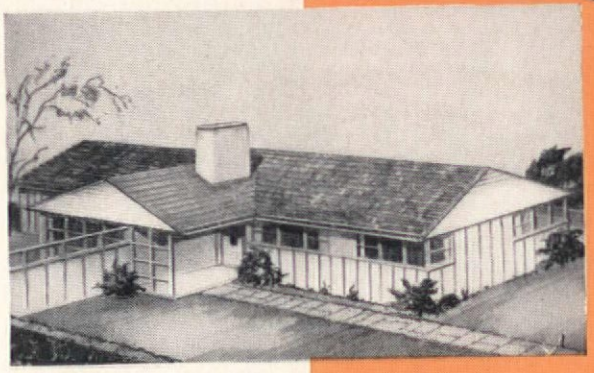
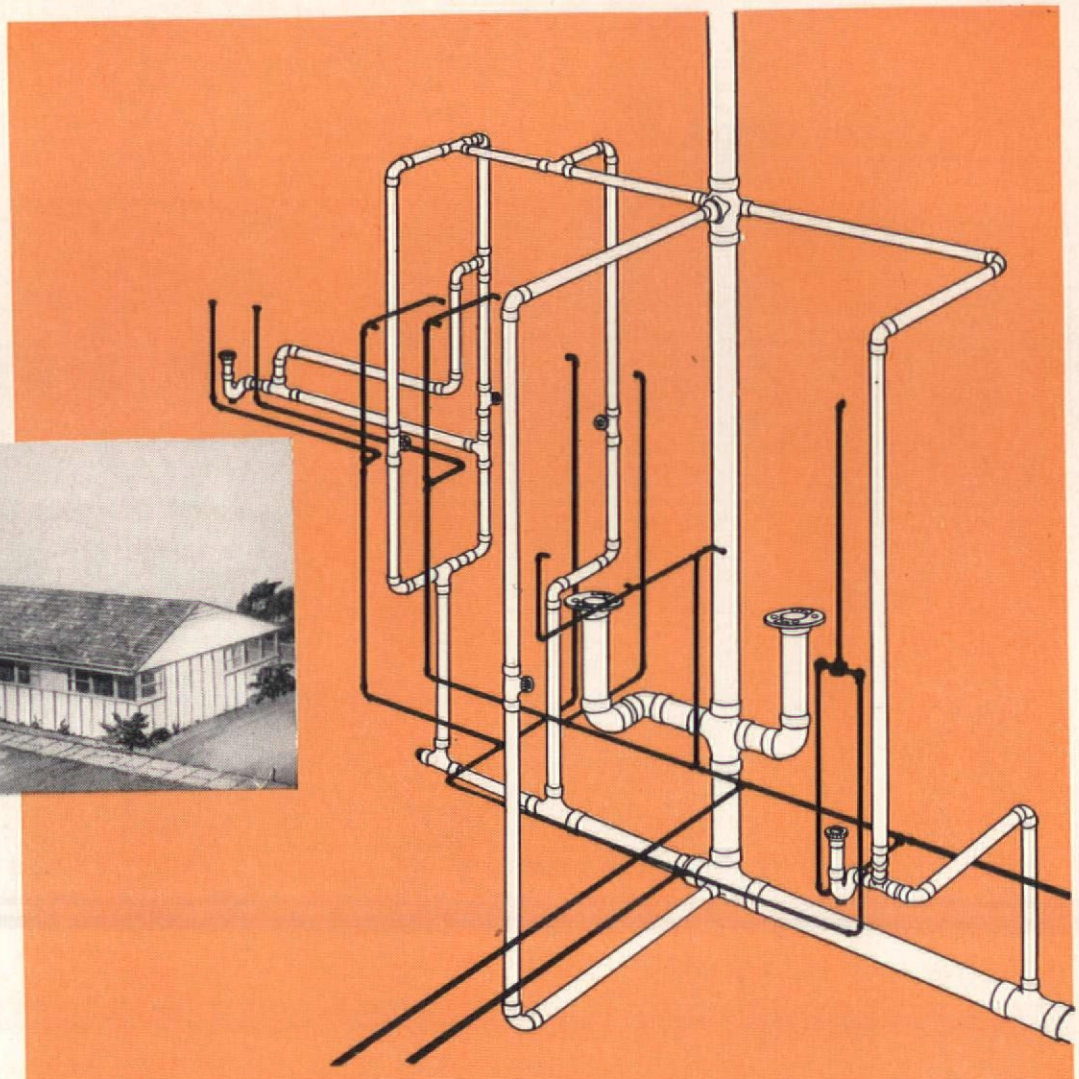


Architect Walter T. Anicka's "ranch" house is ideal for small-lot, built-up urban areas. It is one of seven plans chosen by the 1953 American Builder Catalog Directory to provide builders with typical construction problems.



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Outline Piping—Type "M" Copper Tube: Soil, Waste and Vent Lines

Easily installed copper adds long life to this "typical" ranch house

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The schematic drawing above shows the plumbing layout for a ranch-type house designed by Walter T. Anicka. Hot and cold water lines are Type "L" ANACONDA Copper Tubes. Easily joined fittings are solder type. For the soil, waste and vent lines, Type "M" ANACONDA Copper Tubes and solder type drainage fittings are used. Where code permits a 3-in. stack, it will fit into a 4-in. stud partition, saving space and construction costs. All other drainage lines and back vending are 1¼ in., 1½ in. and 2 in. They're easier to work with . . . often cost less to install.

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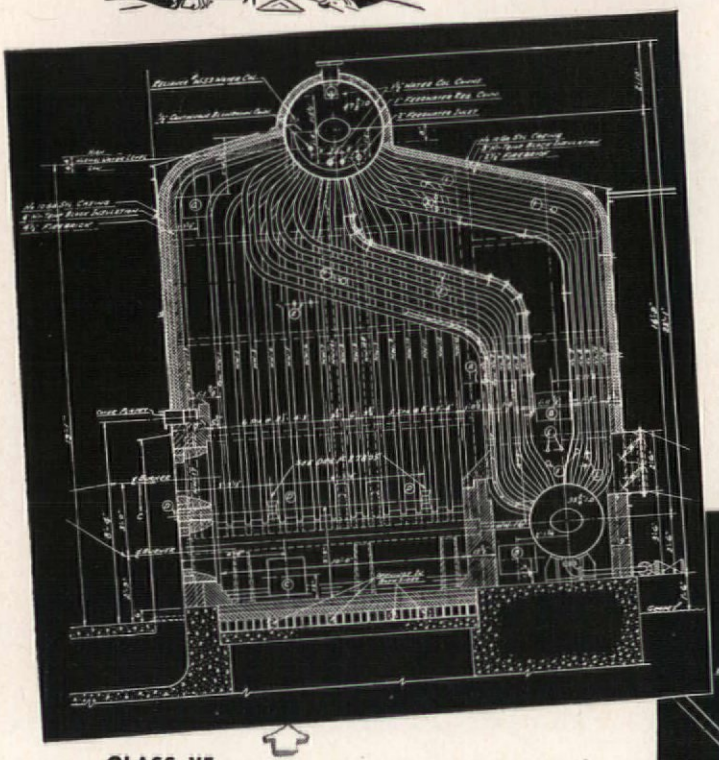
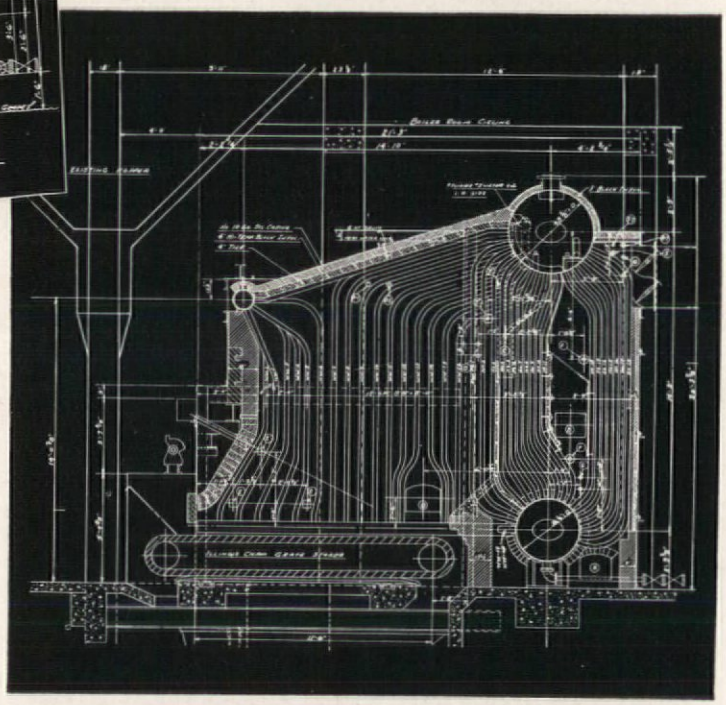


CLASS VF
A 22,000 pounds steam per hour unit installed at Indiana Farm Bureau Refinery, Mt. Vernon, Ind.



CLASS VS
The Seelbach Hotel, Louisville, Ky. is served by this 30,000 pounds steam per hour boiler.

A wide variety of industrial plants and other users of steam for power, processing, or heating have found these efficient Vogt Two-Drum Type Boilers to be the answer to their diverse steam generating requirements.

Class VF units provide maximum capacity in limited floor space and head room, while Class VS is best adapted to installations not having such restrictions. Each has a large furnace volume and a high ratio of radiant heating surface. The furnace design assures proper combustion of fuels fired in suspension or with various type of stokers

A bulletin with general information and showing typical installations is available on request.

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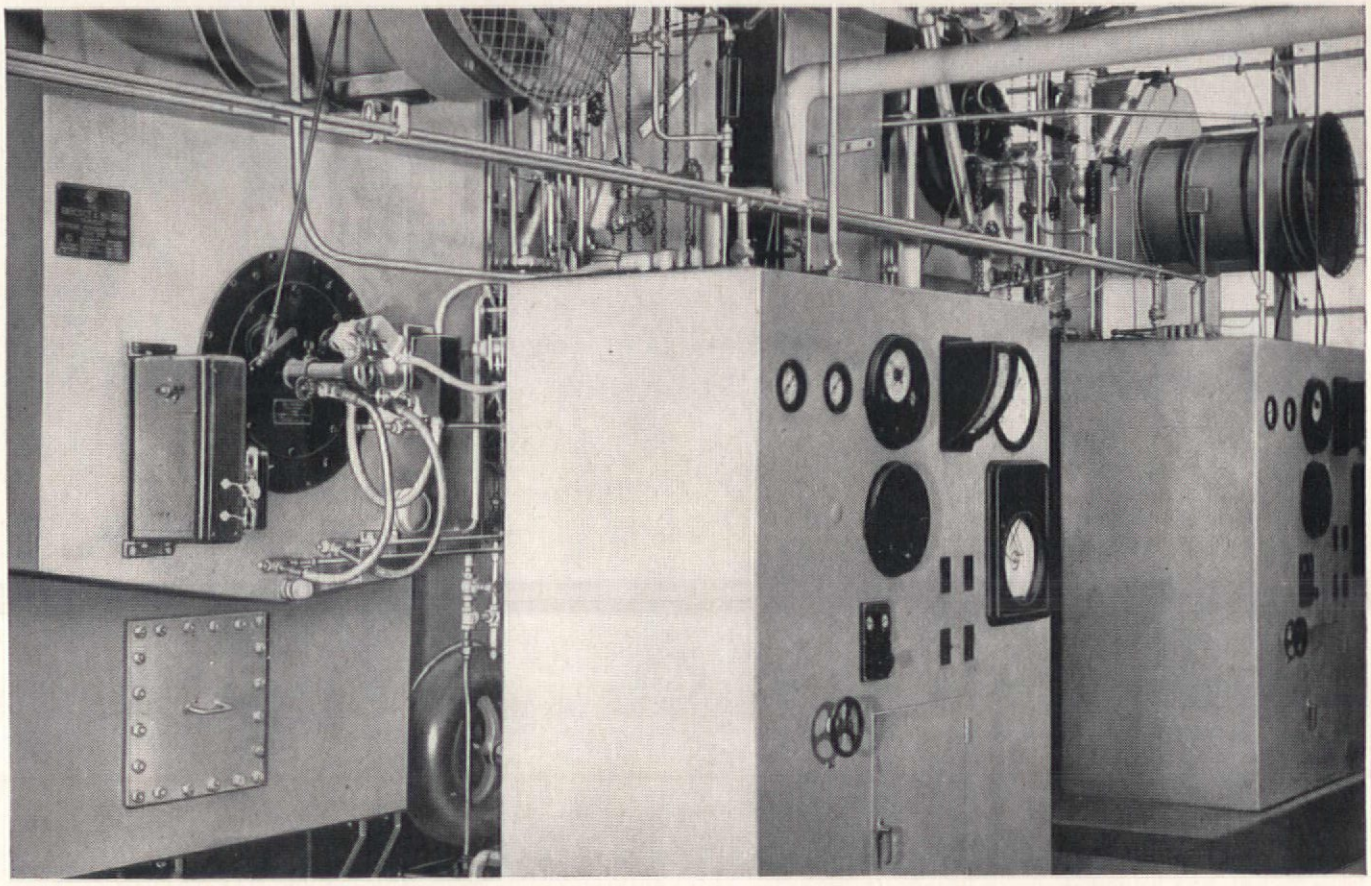

These two Type FM, B&W Integral-Furnace Boilers supply steam for all heating, cooking, and laundry requirements at a large midwestern hospital.

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- Fast Steaming
- Low Maintenance
- Easy Accessibility
- Burns Oil and/or Gas
- Saves Fuel
- Saves Space
- Safe, Automatic Operation

Among the many enthusiastic users of the shop-assembled B&W Integral-Furnace Boiler, Type FM, hospitals have found it uniquely suitable to meet their varied steam requirements. Typical of the FM Boilers now serving hospitals in various parts of the country is this dual-unit installation, which is supplying low-cost steam for all heating, laundry, and cooking requirements at a midwestern institution.

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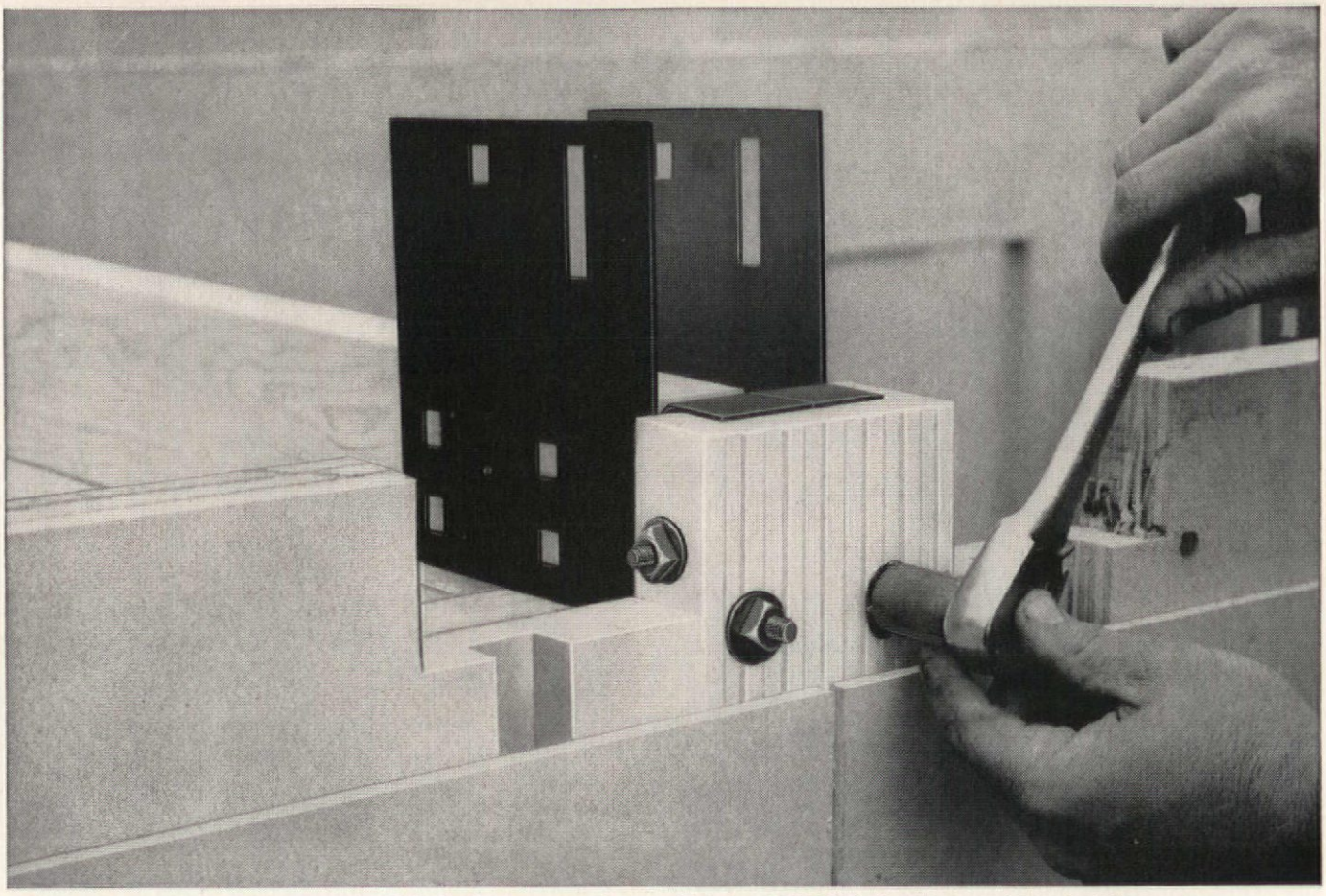

RAISING THE ROOF of a U.S. Steel home goes faster with help of RB&W bolts. Here workman is tightening bolt holding steel plate to exterior wall panel. Plate is then used as joint for bolting ceiling panels.

That's a house he's bolting together!

U.S. Steel Homes found that bolting together the panels of their fast-selling homes saves time and trouble. Nails are used only to hold panels temporarily in position for bolting and add no structural strength.

It's no accident, of course, that RB&W bolts and nuts were specified here. U.S. Steel Homes isn't the first to discover that the absolute uniformity and dependable holding power of RB&W products make them the best fasteners for any job. Workmen like the way RB&W nuts run on RB&W bolts fast and easy. And there's no question about the extra strength RB&W bolt-and-nut construction gives these homes.

Whenever you want to put something together *fast*, and make it stay fastened *for good*, give one of our men a ring. As a top-ranking maker of all kinds of fasteners, we're always able to recommend and supply the right ones for all your needs. You can count on fast delivery, too. RUSSELL, BURDSALL & WARD BOLT AND NUT COMPANY, Port Chester, N.Y.

HOUSE GOING UP. U.S. Steel home nears completion as workmen on scaffold (right) bolt on exterior panels. These sturdy homes offer quality construction at budget price.

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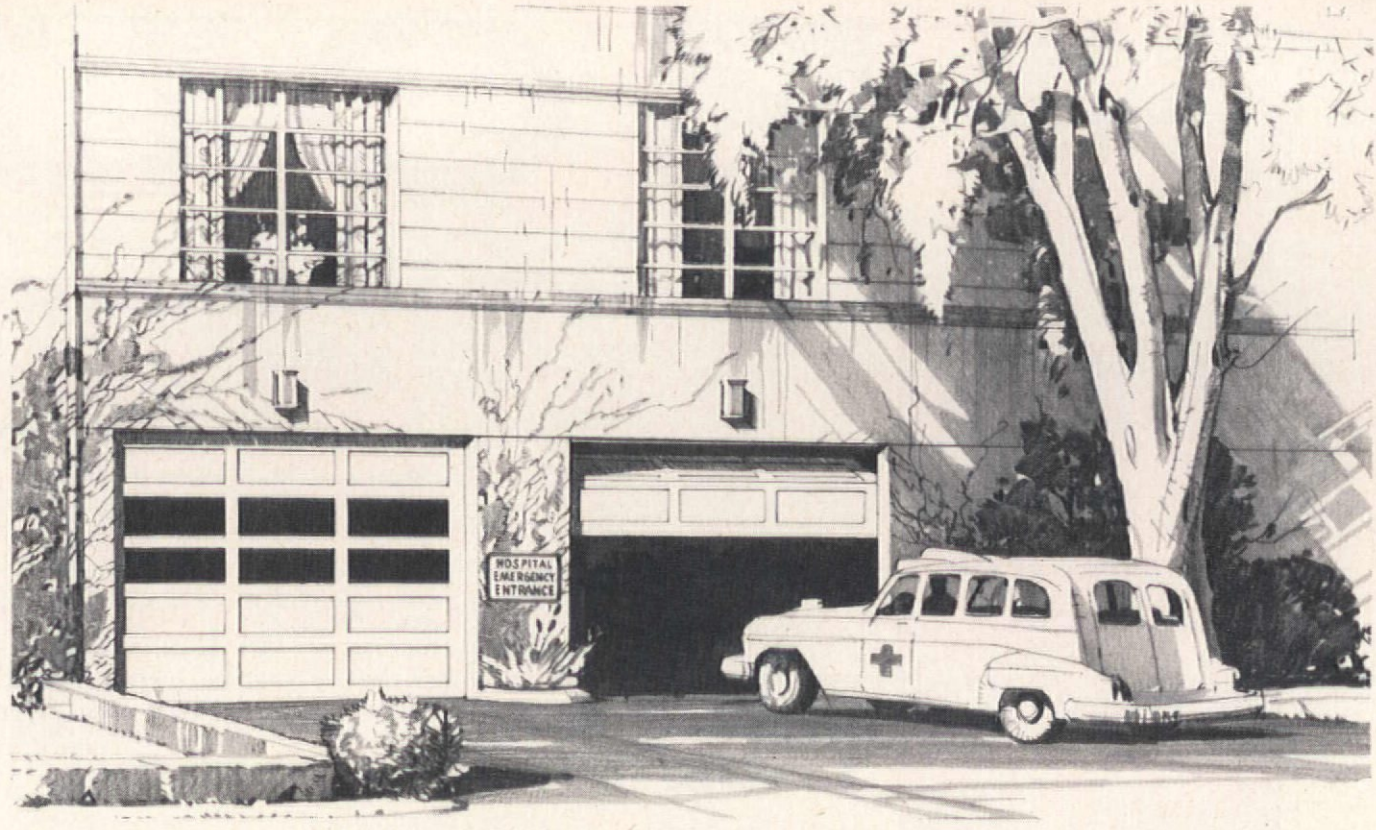

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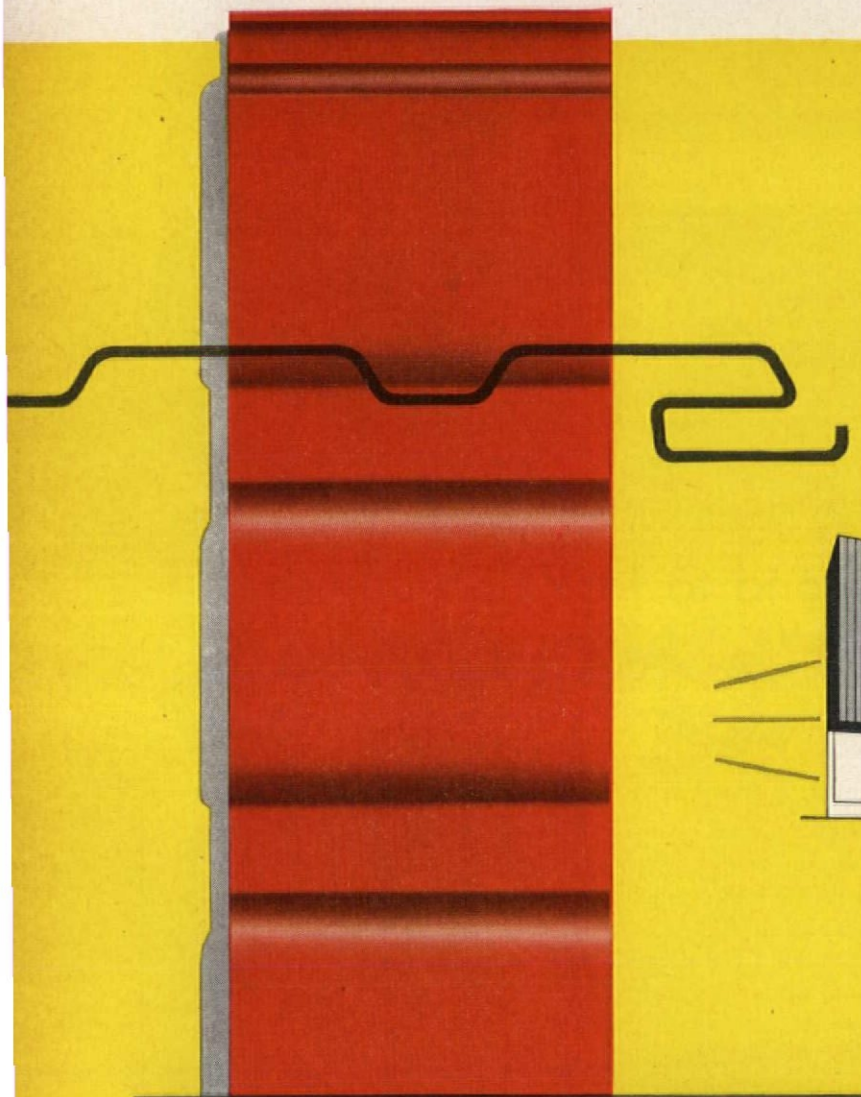

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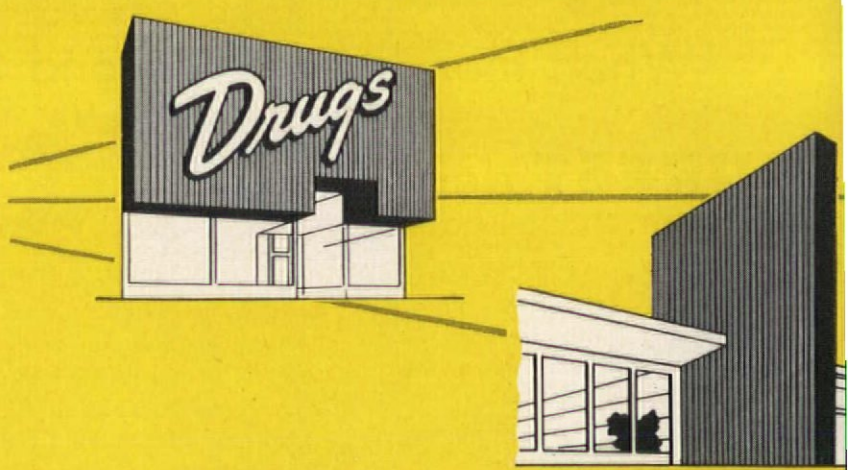

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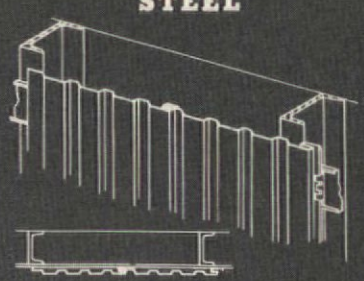

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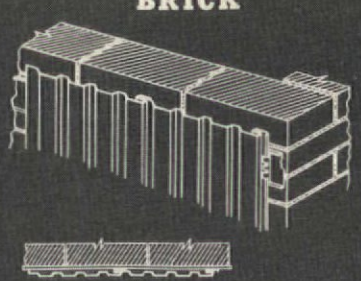

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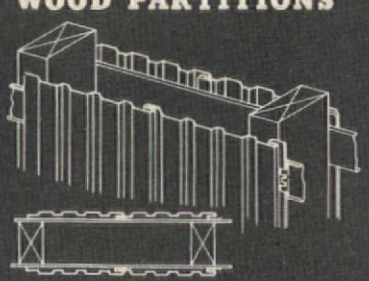

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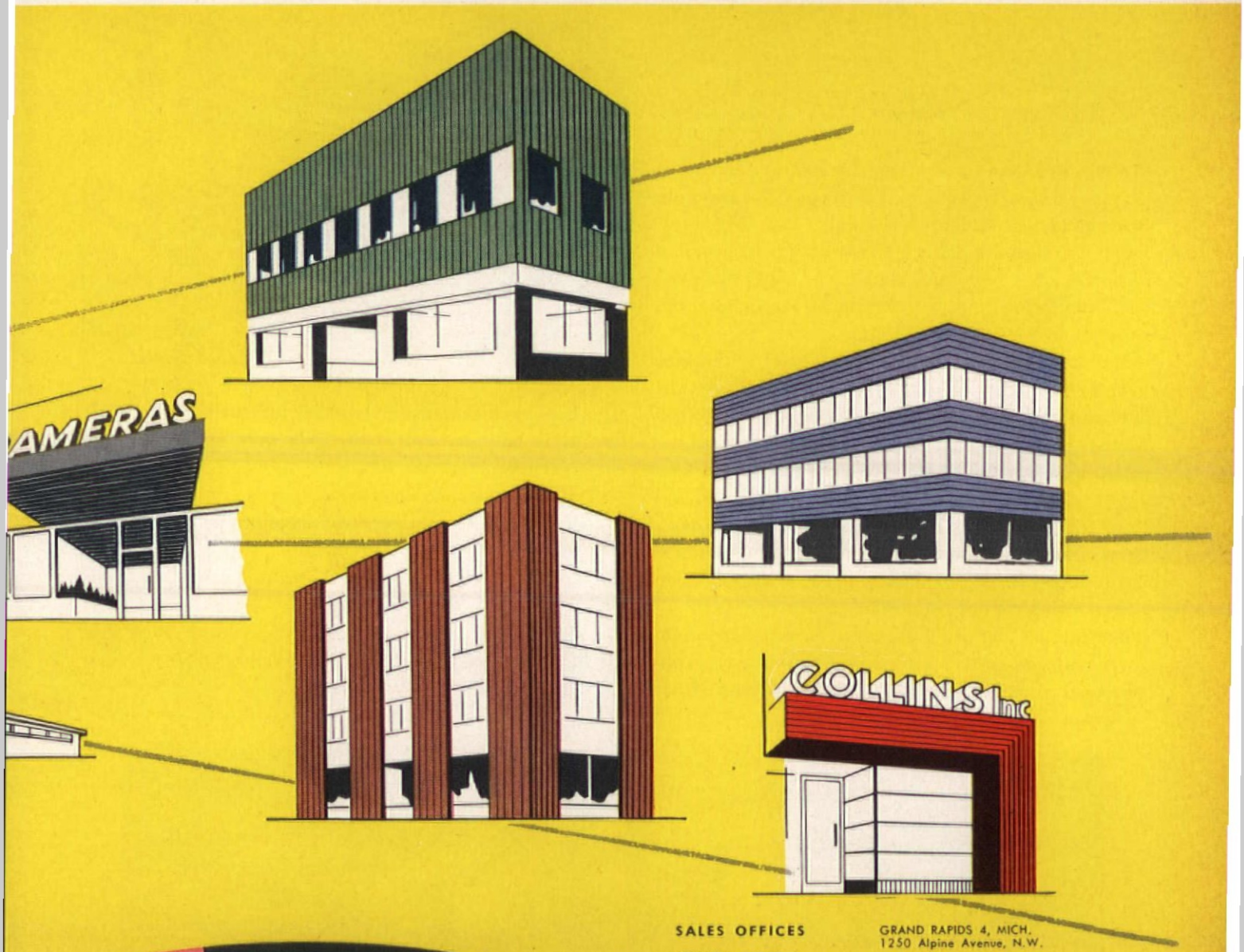

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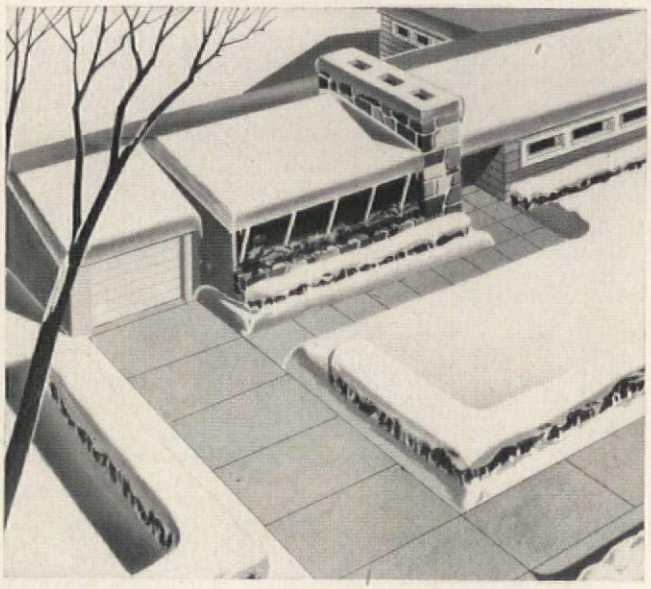
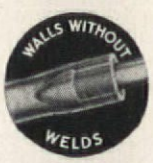
The old snow shovel's gathering dust

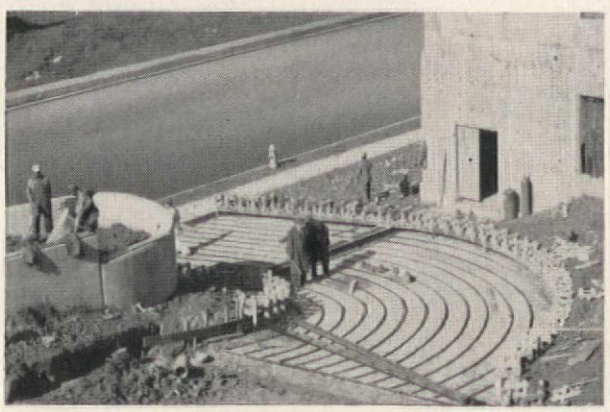


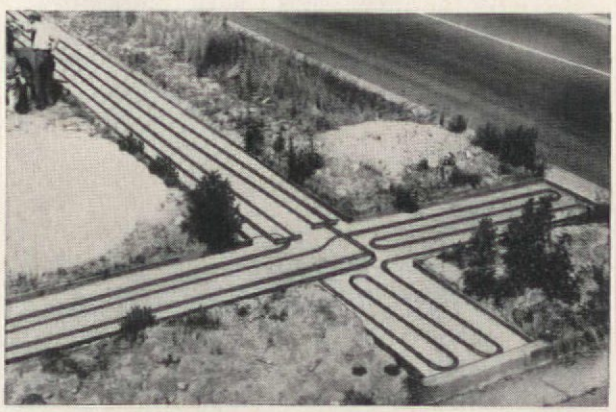
TODAY'S modern snow melting installations have sent many a snow shovel into retirement. In addition to being used for residential sidewalks and driveways, hundreds of snow melting systems have been installed at hotels, office buildings, church entrances, theaters, train platforms, and bus terminals throughout the snowfall areas of the United States.

Besides taking the aching back out of a tiresome winter chore, snow melting systems take the accident and lawsuit hazard out of dangerous, icy sidewalks. Moreover, when used in front of theaters, around department stores and other business establishments, they offer a wonderful psychological advantage. People tend to congregate in these clear areas on bad winter days. Thus, the snow-free sidewalks before a place of business create good will, and the merchandise on display there is seen by large groups of people.

For over 50 years, architects, engineers and contractors have been specifying NATIONAL Steel Pipe for conventional plumbing and heating systems until it has become the nation's standard for such applications. It is only natural, then, that they should turn to NATIONAL for this relatively new application—snow melting systems. They know that NATIONAL Pipe has the inherent characteristics necessary to meet the requirements of such applications – smooth, uniform bending; sound, strong welding properties; and long service life. Small wonder that such confidence has made NATIONAL Steel Pipe America's largest selling pipe for snow melting service.







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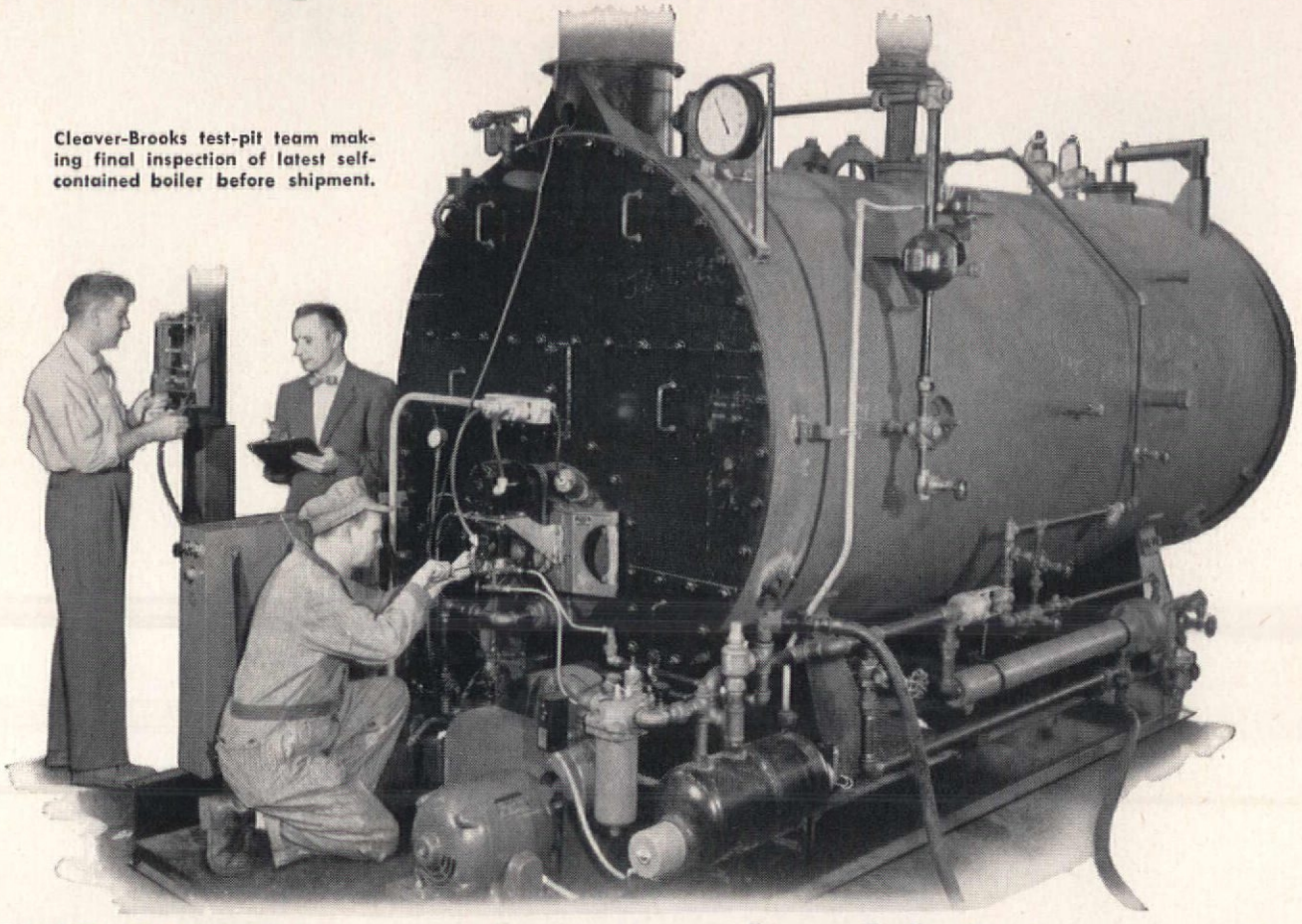
UNITED STATES STEEL

their counterpart "Test-Pilots" have at Cleaver-Brooks



Cleaver-Brooks test-pit team making final inspection of latest self-contained boiler before shipment.

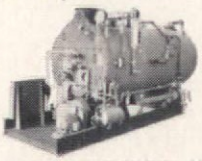
HIGH SCORES . . . on factory and on-job tests guarantee greatest return from boiler investment

When test pilots give the familiar "O.K." — that's the sign of proven performance. It's the same with boilers in the Cleaver-Brooks plant. Only after accurate, thorough inspection and testing under actual operating conditions do boilers get the final "O.K." from experienced test engineers. That's why you get guaranteed 80% efficiency from your Cleaver-Brooks boiler when firing with oil.

A record of this test is available to every buyer on request. In fact, you as a buyer, consultant, or contractor are invited to witness the actual test on your Cleaver-Brooks boiler before shipment.

And further, Cleaver-Brooks boilers are placed in operation at the job site by factory service engineers who check installation, train your operators and make complete and detailed field tests.

So, when you buy a boiler, insist on factory tests as well as field service tests by qualified engineers. There is no better way of insuring yourself of the very best value money can buy and the greatest return from your boiler investment. Look to Cleaver-Brooks, the leader in the "Packaged" Boiler field for two decades. Write today for latest Catalog AD-100.



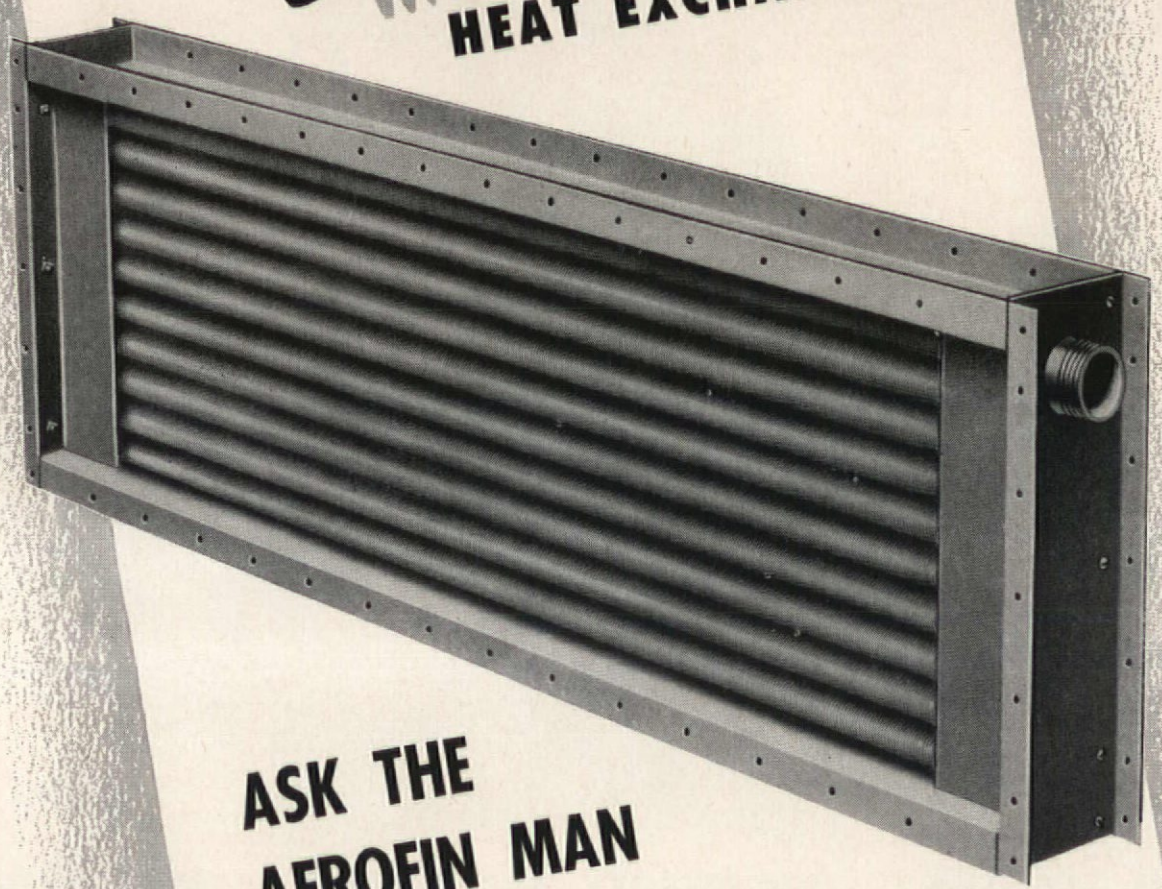
Available for oil, gas and combination oil/gas firing.

CLEAVER-BROOKS COMPANY
Dept. C, 334 E. Keefe Ave.
Milwaukee 12, Wisconsin, U.S.A.

Cleaver-Brooks
Originators of the Self-Contained Boiler

BOILERS — STEAM OR HOT WATER — FOR HEATING AND PROCESSING IN SIZES FROM 15 TO 500 HP, 15 TO 250 PSI

*FIRST LINE *Extended-Surface* HEAT EXCHANGERS



ASK THE AEROFIN MAN

Specify Aerofin and you specify high efficiency, long service life and low maintenance and service costs.

Take advantage of Aerofin's unequalled experience, production facilities, and materials-testing and design research—of Aerofin's complete engineering service at the plant and in the field.

Ask the Aerofin man.

* Aerofin makes extended heat surface exclusively — not as a by-product, not as a side-line. Sold only by manufacturers of fan-system apparatus. List on request.

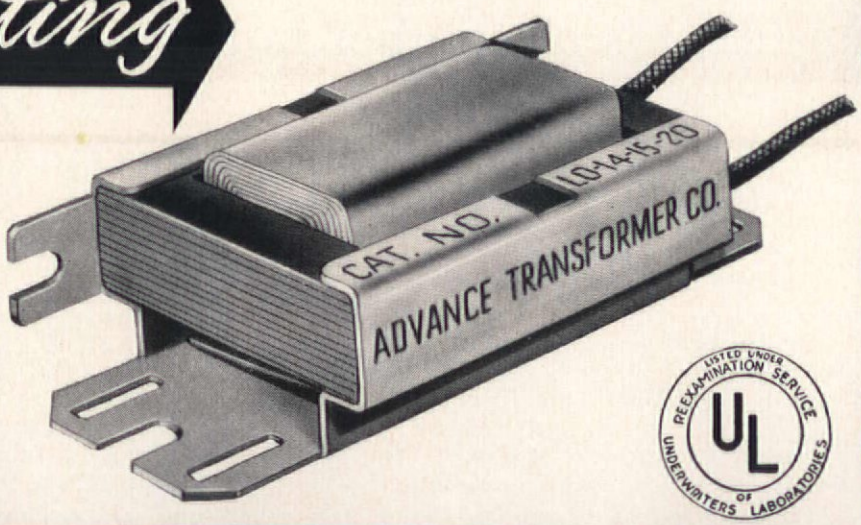
AEROFIN CORPORATION
410 South Geddes St., Syracuse 1, N. Y.

YOU asked for it!

In response to the industry's request, Advance Transformer Co., announces its new open type low wattage lamp ballast.

Presenting

The LO-4-6-8 and the LO-14-15-20 QUIET CORE AND COIL BALLASTS for low wattage fluorescent lamps. Light weight, compact, sturdy. For low wattage strip lights, medicine cabinet lights, electric range lights, counter display signs and all other uses where small space and low noise level are a requirement.



ADVANCE TRANSFORMER CO.

Designed & Engineered BY THE WORLD'S LARGEST MANUFACTURER DEVOTED *Exclusively* TO THE PRODUCTION OF FLUORESCENT BALLASTS

Cable Address "ADTRANS"

2950 N. WESTERN AVE., CHICAGO 18, ILLINOIS, U.S.A.

Altoona Veterans Hospital

Altoona, Pennsylvania, designed by Marlier, Wolfe and Johnstone; Architects, Pittsburgh, Pennsylvania.

Washrooms of another notable building finished in Carrara Glass

• In the country's foremost buildings, beautiful and durable Carrara Structural Glass has long been first choice of leading architects for walls, stiles and partitions in washrooms.

And this is particularly true when specifications for hospital washrooms are under consideration. For Carrara Glass has many features which make it especially adaptable to the needs of the modern hospital.

Carrara is all glass, with a smooth, homogeneous texture that is highly impervious to the attacks of acids, water, steam, soap, chemicals and cleaning compounds.

Its surface is mechanically ground and polished to an unusually smooth, even finish that is easy to clean and keep clean. And because Carrara is manufactured in large sections, there are fewer joint crevices to catch dust and dirt. Thus the maintenance of high hospital standards of sanitation is greatly simplified.

For more information on this beautiful and colorful structural glass, write to Pittsburgh Plate Glass Company, Dept. 4179, 632 Fort Duquesne Blvd., Pittsburgh 22, Pennsylvania.

Carrara ... the quality structural glass

PPG

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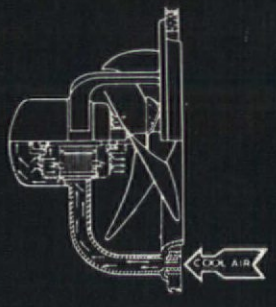
PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

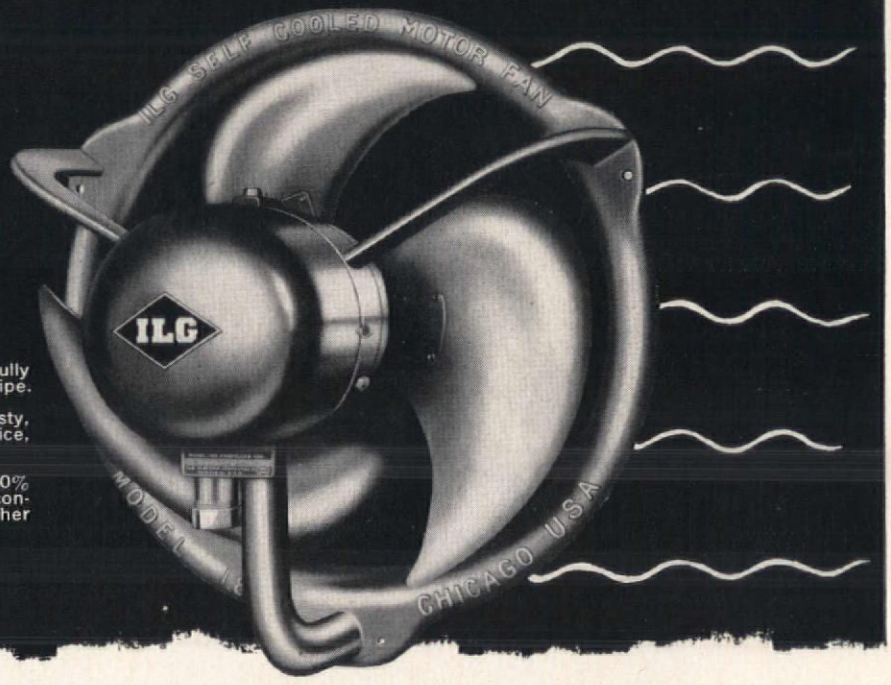
Faster Air Change...

with lower maintenance and power costs!



"SELF-COOLED" CONSTRUCTION

- Clean, cool, fresh air is drawn into fully enclosed motor through outside vent pipe.
- Motor stays clean, cools itself—no dusty, greasy air reaches it to interrupt service, shorten its life.
- Low operating cost—you save up to 10% on power costs alone. "Self-cooled" construction is an ILG exclusive ... no other fan has it!



ILG®

PROPELLER FANS

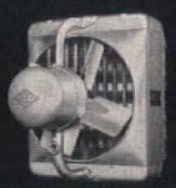
The secret is in ILG's exclusive SELF-COOLED MOTOR!

Here's the one fan with the motor that cools itself with fresh, clean *outside* air. The result is longer trouble-free, dependable performance. And you can count on it to move more air, too—each ILG fan is rated and certified in accordance with the standard test code! The dynamically-balanced fan wheel, direct-connected to motor, gives quiet, smooth, free-running operation. ILG's famous "one-name-plate" guarantee covers fan and ILG-built motor as one unit. Choose from a complete range of sizes—6″ to 72″.

Clear up all doubt... count on ILG to clear the air for action!

ILG ELECTRIC VENTILATING CO.
2850 N. Pulaski Road, Chicago 41, Illinois

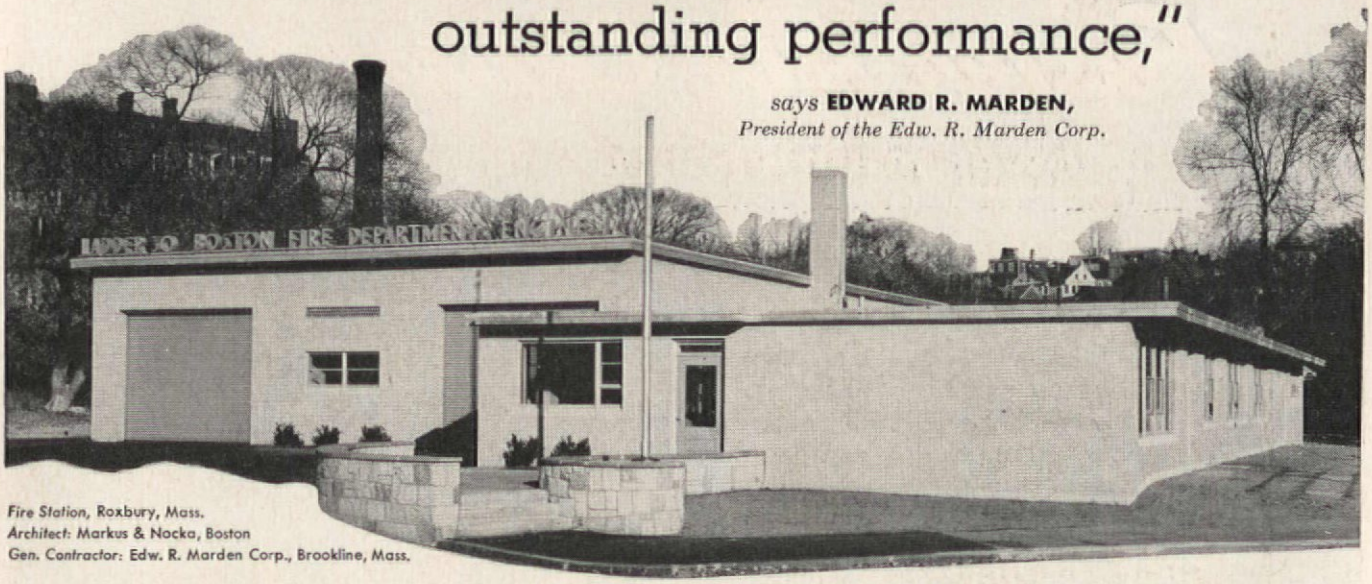
Power Roof Ventilators


Unit Heaters

Centrifugal Fans

"From the test panel until the last brick was laid **ATLAS MORTAR** gave us outstanding performance,"

says **EDWARD R. MARDEN,**
President of the Edw. R. Marden Corp.



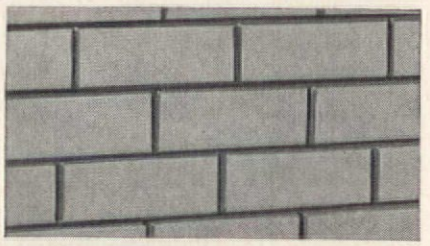
Fire Station, Roxbury, Mass.
Architect: Markus & Nocka, Boston
Gen. Contractor: Edw. R. Marden Corp., Brookline, Mass.

This contractor goes on to say about Atlas Mortar, "The architect praised its appearance and color, our masonry foreman liked the boost it gave production, and the masons welcomed its smooth workability.

"From an over-all point of view, I liked the smooth-running, profitable masonry job and the attractive look of the structure that Atlas Mortar provided. You may be sure it will play a featured part from now on in our construction work."

Mr. Marden's statement is typical of many reports we receive. Contractors, architects and masons agree that Atlas Mortar combines outstanding workability with strength, durability and good appearance.

Buttery-smooth—Masons and architects know the difference... bricklayers like the way exceptionally plastic Atlas Mortar responds to the trowel.



True, tight joints—Masonry units skillfully bonded with Atlas Mortar assure strong walls and tight joints. Hardening is satisfactory, and color is uniformly good.

OFFICES: Albany · Birmingham · Boston · Chicago · Dayton · Kansas City · Minneapolis · New York · Philadelphia · Pittsburgh · St. Louis · Waco

ATLAS MORTAR has proved itself on large jobs and small and in the laboratory as well. It complies with ASTM and Federal Specifications for masonry cement. For further information write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Avenue, New York 17, N. Y.

AR-M-44

SKILLED HANDS PREFER

ATLAS MORTAR CEMENT®

THE SATIN OF MASONRY CEMENTS

UNITED STATES STEEL HOUR—Televised alternate weeks—See your newspaper for time and station.

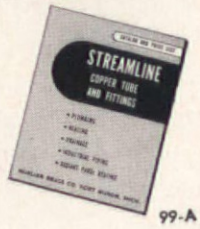
It will pay you to go copper all the way!

helps sell houses faster—houses sell faster and usually command better prices when they have Streamline copper drainage and supply plumbing. Home owners know that all-copper plumbing makes a neat, space saving installation and gives a lifetime of trouble-free service.

makes an efficient, lasting system—Streamline Copper Drainage Tube and Fittings make a tight, completely sanitary system with clean, unobstructed joints that withstand jars and vibrations and are clog resistant. Such a system resists the destructive effects of corrosive acids and will not rust. Ordinarily, Streamline all-copper plumbing will outlast the building in which it is installed and never need repairs.

costs no more—Plumbers can install Streamline copper supply and drainage lines in less time than a cast iron and steel system. Construction costs are also lower because all tubes will fit in a standard 2 x 4 partition—needs no furring or framing—thus actually increasing the cubical content of the building. These savings in installation largely offset the slight additional cost of copper tube and fittings and often make it possible to install Streamline all-copper plumbing for less money.

Write today for our latest catalog of Streamline Plumbing and Heating Products.



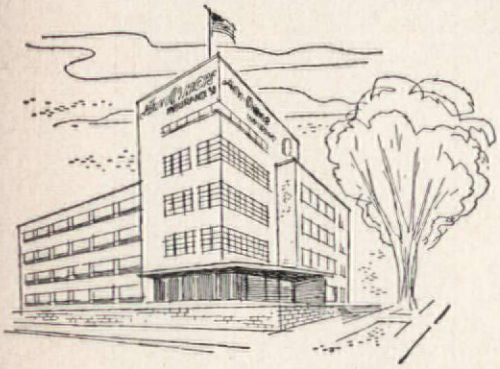
99-A

MUELLER BRASS CO. STREAMLINE PRODUCTS

MUELLER BRASS CO. PORT HURON 5, MICHIGAN

ACOUSTICAL MATERIALS AT WORK

AUTO-OWNERS INSURANCE COMPANY, Lansing, Michigan



Architects:
Lee and Kenneth Black

General Contractor:
Christman Company

Acoustical Contractors:
Grand Rapids Acoustical Co.
Detroit Acoustical Contracting Co.

The latest developments in contemporary design and decoration are incorporated in this new Auto-Owners Insurance Company building. Planned as the company's new home office, every feature contributes to efficiency, economy, and employee comfort.

Even the ceilings were chosen with this purpose in mind. Sound-absorbing ceilings of Armstrong's Arrestone soak up distracting noise and help to promote comfortably quiet working conditions.

Arrestone is a perforated metal-pan type acoustical material, backed up with a mineral wool pad. Unusually high in acoustical efficiency, it absorbs up to 85% of the noise that strikes its surface. Arrestone's smooth, white enamel finish is an excellent light reflection and can be readily washed or repainted.

Installed by mechanical suspension, Arrestone units can be easily removed when necessary to repair concealed piping, wiring, or ducts.

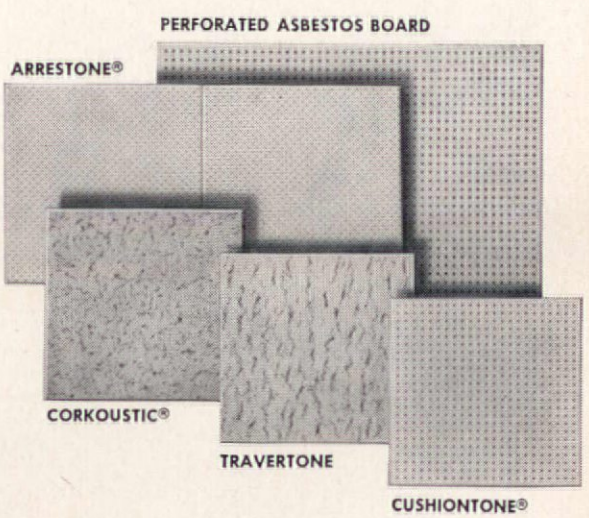
See your Armstrong Acoustical Contractor for complete details on Arrestone and Armstrong's other sound-conditioning materials. For a copy of the free booklet, "How to Select an Acoustical Material," write Armstrong Cork Company, 4203 Rock Street, Lancaster, Pennsylvania.

Mistakes are held to a minimum in the company's Underwriting Department. Here, the distracting clatter of typewriters, business machines, and voices is effectively muffled by the Arrestone ceiling. This material offers a maximum of sound absorption.

Modern recessed lighting in the Accounting Department and throughout the building helps prevent tiring eyestrain. The white, baked-on enamel finish of the Arrestone ceiling helps diffuse the light evenly all over the room, without annoying glare.

This spacious recreation room gives employees an ideal spot for reading, chatting, or just relaxing. Noise-absorbing ceilings of Armstrong's Arrestone help promote a quiet atmosphere, even when the room is crowded.

ıple space for the largest gatherings is provided by this modern embly room. For the comfort of both audience and speakers, per acoustics are maintained by the ceiling of Arrestone.



ARMSTRONG'S ACOUSTICAL MATERIALS

RECENT CONSTRUCTION WITH STRUCTURAL STEEL

Office Building in New York

This fourteen-story structure, the Central Office Building of the New York City Transit System, is part of the growing Brooklyn Civic Center. It is adjacent to the three subway divisions of the Transit System, and has a sub-basement five stories deep. The steel framework was built of Bethlehem Structural Shapes. *Architect:* Andrew J. Thomas; *General Contractor:* Grove, Shepherd, Wilson & Kruge, Inc.; *Steel Fabricator and Erector:* Harris Structural Steel Co. — all of New York.

Apartment Structure in Alabama

Bethlehem Structural Shapes were used in constructing the Walter Bragg Smith Apartments, Montgomery, Ala. The twelve-story building, containing 122 apartments, was planned primarily for business men and women. *Architects and Engineers:* Sherlock, Smith & Adams, Montgomery; *General Contractor:* Bear Brothers, Inc., Montgomery; *Steel Fabricator and Erector:* Decatur Iron and Steel Co., Decatur, Ala.

Bank Building in Florida

This is the building of the Atlantic National Bank of Jacksonville, Jacksonville, Fla. Its four stories are faced with grey granite and white marble, and are supported by a framework of Bethlehem Structural Shapes. *Architects and Engineers:* Bank Building & Equipment Corp. of America, St. Louis; *Structural Engineers:* R. L. Eason & Associates, St. Louis; *General Contractor:* The George D. Auchter Co., Jacksonville; *Steel Fabricator and Erector:* Aetna Steel Co., Jacksonville.

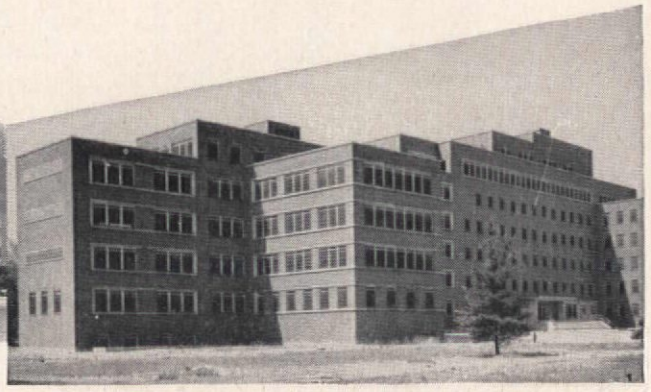
BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM STEEL

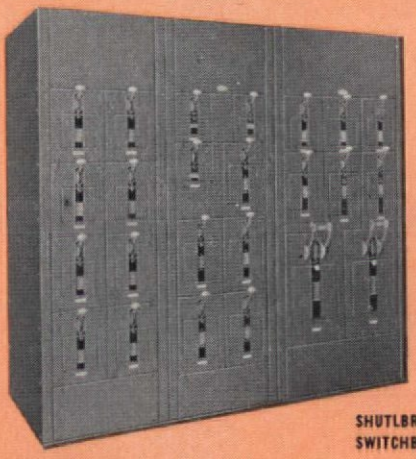
Give Your Hospital Clients Modern Circuit Protection . . .

Southeast Florida Tuberculosis Hospital, Lantana, Florida, equipped with FA products. *Architects and Engineers,* Reynolds, Smith & Hill, Jacksonville, Florida; *Associate Architect,* Charles F Kuhm, Jacksonville, Florida.

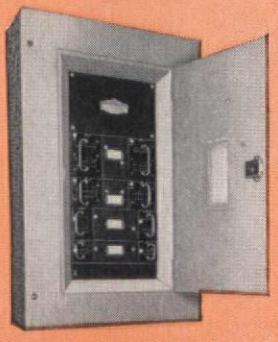


Buffalo State Hospital and Surgery Building — another FA equipped institution. *Architects,* York & Sawyer, New York; *Engineer,* Edward A. Sears, New York.

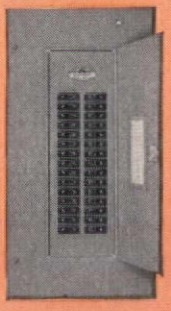
Specify ELECTRICAL PRODUCTS



SHUTLBRAK SWITCHBOARD



PULFUZSWITCH PANELBOARD



QP QUICKLAG P PANELBOARD

FA PRODUCTS are noted for their safety, efficiency, dependability, and economy of operation — vitally important factors in modern hospital and other types of construction.

A pioneer in the manufacture of products for the control and distribution of power and light, FA has specialized in the development of equipment that is modern in design, rugged in construction and will give long and trouble-free service — products that measure up fully to the requirements of the Underwriters' Laboratories, Inc., and the highest standards of the industry.

If you want to assure your hospital and other clients modern circuit protection, then specify FA on all your plans. Your nearest FA representative, listed in Sweet's will be glad to provide additional information on any or all FA products.

Frank Adam Electric Co.

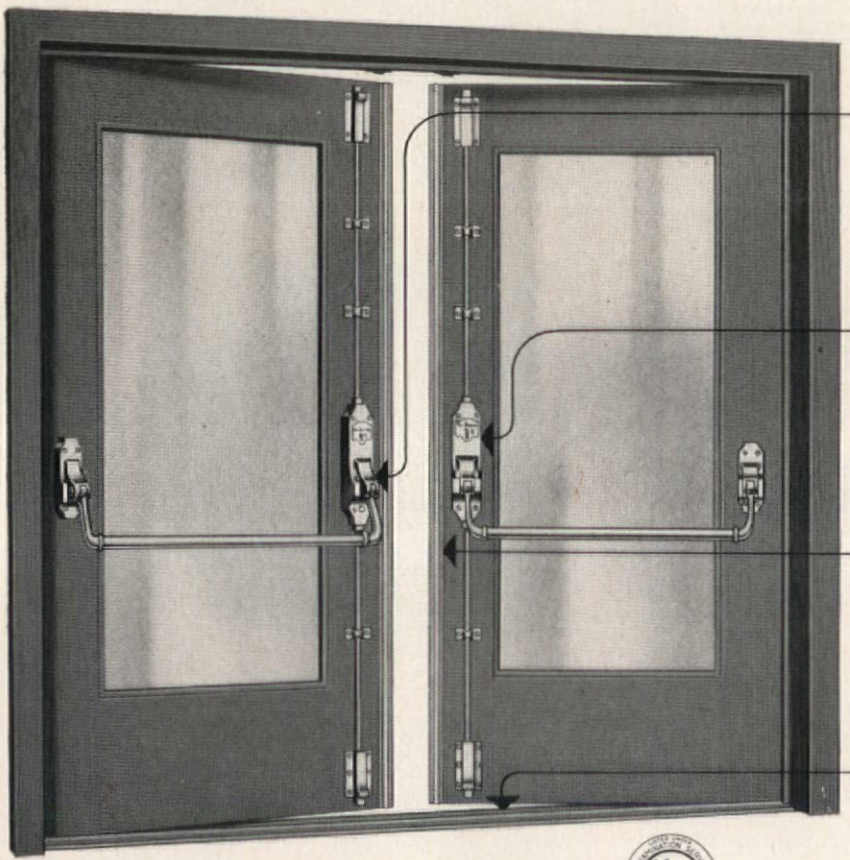
P. O. BOX 357 • ST. LOUIS 3, MISSOURI

Makers of: BUSDUCT • PANELBOARDS • SWITCHBOARDS • SERVICE EQUIPMENT • SAFETY SWITCHES • LOAD CENTERS • QUIKHETER

INSIST ON

Von Duprin

COMPLETE EXIT INSTALLATIONS



No. 27B² Exit Device—For the inactive door. No outside hardware—exit only. Drop-forged for greater strength and wear. Crossbar reinforced by full-width X-Bar. Pullman top and bottom latches operate independently.

No. 23B² Exit Device—For the active door. Companion device of 27B². Outside knob locked by outside key. Doors are push-pull with crossbars dogged.

No. 3246—Compensating Metal Astragal—Extruded architectural bronze. Easily adjusted up to ⅝" to compensate for varying door clearances. Independent operation of each door.

No. 12390 "Latch-Track" Threshold—Extruded architectural bronze. Stumble-proof, ¼" thick stop extends the full width of opening . . . retards wind and water . . . serves as a door stop and latching point.

• For exits that are dependable, attractive and *safe,* always specify Von Duprin exit hardware. The Von Duprin line includes all types of devices and auxiliary items—everything you need for the complete exit installation on any type exit. Check the smart modern style—*all* the quality features in the double-door, vertical rod installation illustrated above.

WHEN YOU SPECIFY Von Duprin devices and accessories, you can be sure of the foremost quality and performance in every item. And you get the *complete* job, ready to go, at one time, in one shipment. Naturally, installation is easier and quicker . . . performance is better. For complete details, contact your Von Duprin "Exit Specialist." If you don't know his name, write:

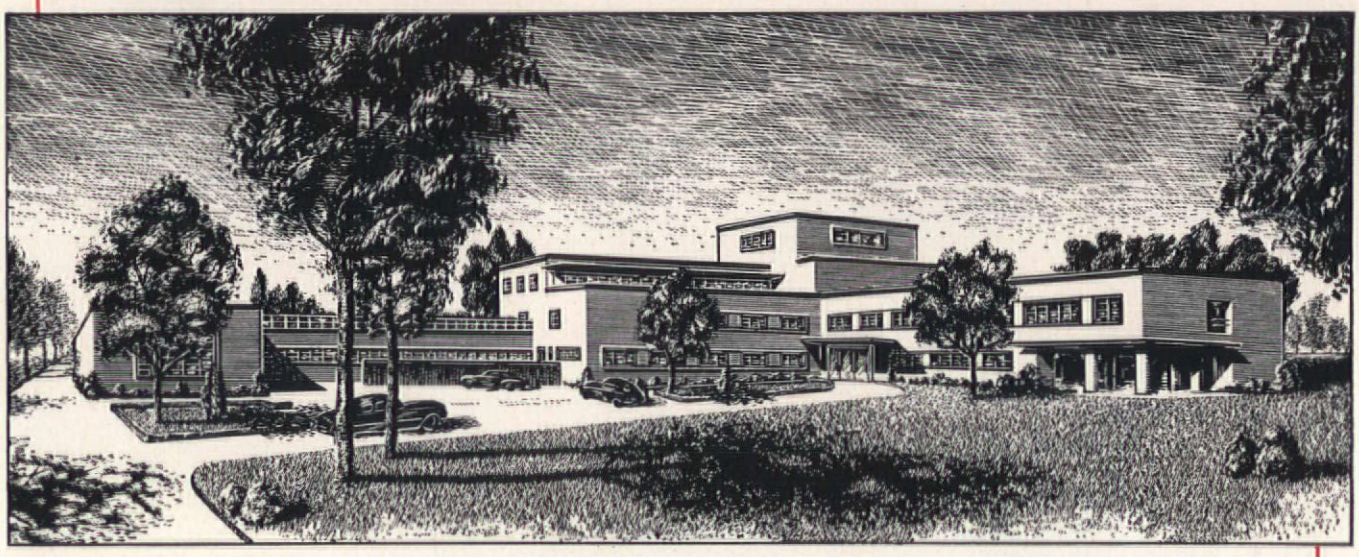
VONNEGUT HARDWARE CO. · VON DUPRIN DIVISION · INDIANAPOLIS, INDIANA

IN MODERN HOSPITALS...

SAFETY, COMFORT, ECONOMY

WITH

JOHNSON AUTOMATIC TEMPERATURE CONTROL



Jane G. Phillips Memorial Hospital, Bartlesville, Oklahoma. Neville, Sharp and Simon, architects, Kansas City, Mo.; Wm. L. Cassell, mechanical engineer, Kansas City, Mo.; J. L. Heath Co., heating and air conditioning contractors, Tulsa, Oklahoma.

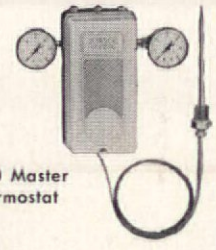
Comfort and health of Jane G. Phillips Memorial Hospital's patients are constantly guarded by Johnson *Individual Room* Thermostats which operate individual room air conditioning units to provide precisely the proper temperatures. The temperatures and humidities in air conditioned operating rooms, delivery rooms and other vital areas are also controlled by Johnson.

This Johnson *Planned-for-the-Purpose, Installed-for-the-Purpose* Control System, throughout the entire hospital, provides greater comfort and faster recovery for patients, permits personnel to concentrate on professional duties and insures the greatest return on every dollar spent for heating and cooling.

But, above all else, because it is *pneumatically* operated, Johnson apparatus meets the most exacting hospital safety requirements. It is completely safe even where there are explosive anesthetic gases. Johnson Humidity Control guards against the dangers of static electricity.

Whether you are planning the regulation of temperatures and humidities in a single operating room or an entire hospital, large or small, old or new, ask an engineer from the Johnson nationwide staff to talk over the desirable features and economy of a Johnson System of Automatic Control. There is no obligation. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.

D-251 Piston Damper Operator



T-900 Master Thermostat

T-901 Submaster Thermostat

V-108 Three-way Mixing Valve

JOHNSON *Automatic Temperature and Air Conditioning* CONTROL

MANUFACTURING • PLANNING • INSTALLING • SINCE 1885

no matter

how you

look at it

Baseboard Heating by TUTTLE & BAILEY adds four important "plus values"

For comfort, there's no comparison with the constant, gentle circulation of heated air that blankets cold outside walls and glass areas with a layer of warmth. Means warmer floors, too . . . and even temperature from floor to ceiling. No cold spots. No drafts. Real comfort on even the coldest days.

For heating economy, T & B Baseboard Heating Panels are quick to respond to thermostatic control. And fast transmission of heat from boiler to rooms adds up to real fuel savings.

For appearance, T & B Heating Panels are styled by Walter Dorwin Teague. Trim, smooth lines that preserve the functional beauty of today's modern home. Easily painted to match wall or trim . . easy to keep clean.

For more living in every room, compact T & B Baseboard Heating Panels save valuable floor space, do not interfere with furniture, wall-to-wall carpeting, or floor-length drapes.

For complete information, selection data, and installation details . . . write for Catalog No. 301

TUTTLE & BAILEY INC

NEW BRITAIN, CONNECTICUT

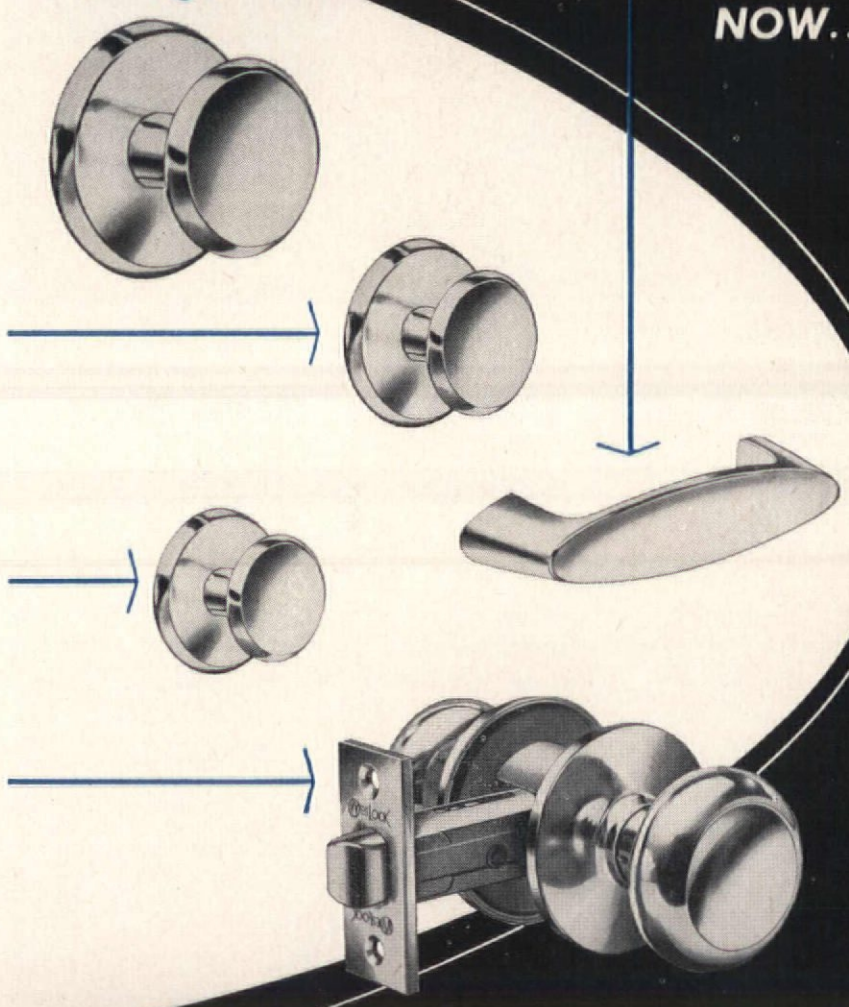
GO MODERN WITH WESLOCK

THE 500 CONCAVE SERIES

NOW... MATCHING DESIGN IN

CABINET HARDWARE

RESIDENTIAL LOCKSETS



THE NEW, CONCAVE CABINET HARDWARE IS AVAILABLE IN BRASS, BRONZE AND CHROME FINISHES AND IN THE FOLLOWING SIZES: CABINET PULL WITH 3" CENTER; CONCAVE KNOB SIZES ARE 1½", 2" AND 2½" DIAMETER; MATCHING CONCAVE BACK PLATES ARE AVAILABLE IN 2", 2½" AND 3½" DIAMETER.

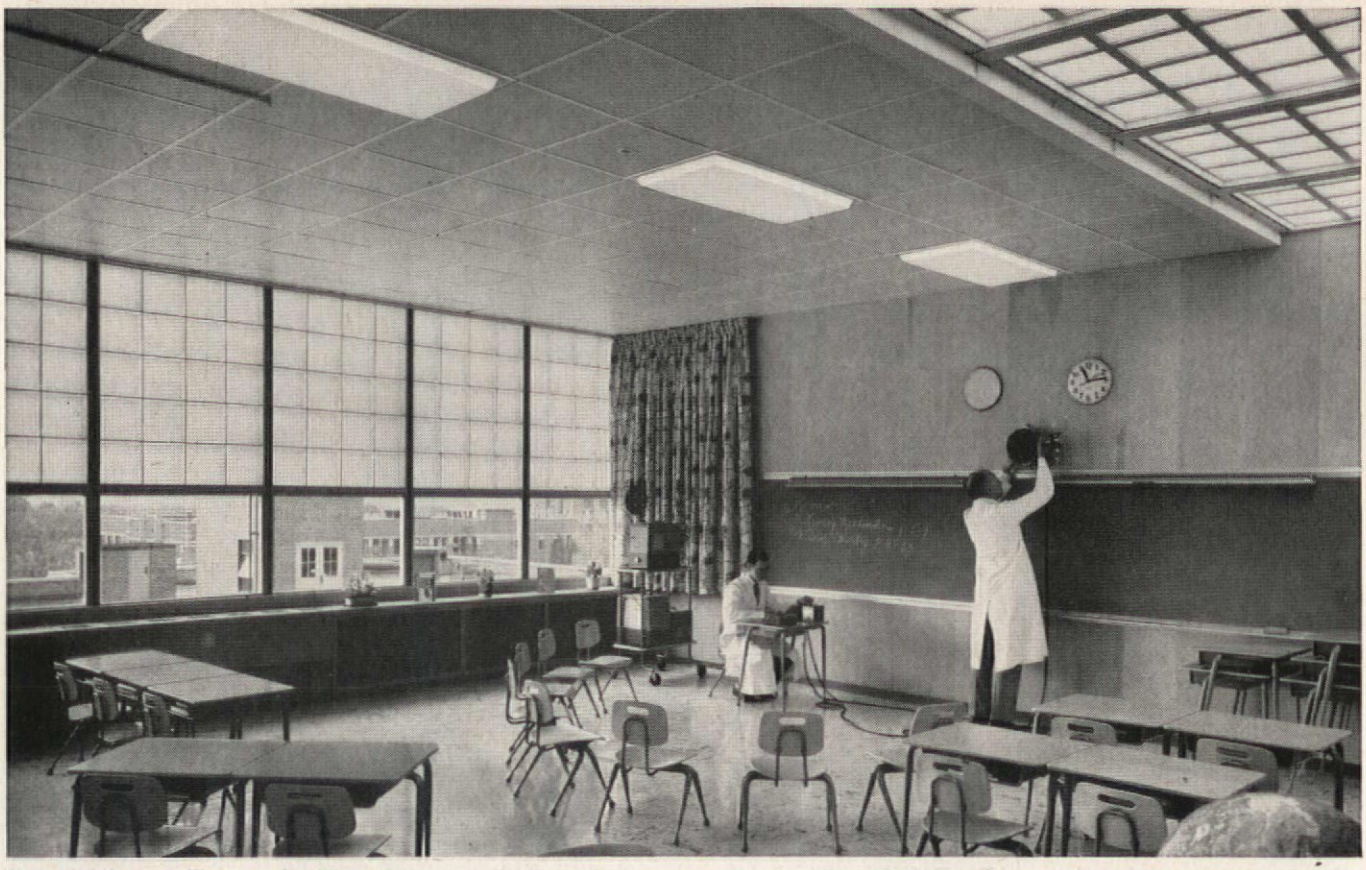
Write for further information

WESTERN WESLOCK

WESTERN LOCK MFG. CO.

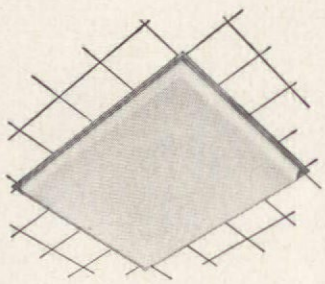
Manufacturers of Weslock Residential Locksets and Builders Hardware

GENERAL OFFICES: 211 NORTH MADISON AVE., LOS ANGELES 4, CALIF. • FACTORY: HUNTINGTON PARK, CALIF.



Research Laboratory Classroom, Daylighting Laboratory, University of Michigan, Sponsored by Owens-Illinois Glass Co.

Wakefield Beta-Plex Ceiling Units Are Used To Supplement Daylighting in "Classroom of Tomorrow"



Beta-Plex is a complete unit ready for recess mounting in a suspended ceiling. Ballasts and lampholders are contained in a metal housing. A Touch-Latch releases and closes the Rigid-Arch Plexiglas diffuser, making the interior of a Beta-Plex unit readily accessible. Four sizes: 2′ x 2′, 2′ x 4′, 1′ x 4′ and 4′ x 4′.

On dark days, when daylight falls below the minimum requirements, supplementary electric lighting is provided automatically by Wakefield Beta-Plex units controlled by a photo cell. Beta-Plex units were not chosen for "the classroom of tomorrow" by accident. They were chosen because, when unlighted, they have an exclusive non-specular matt finish which breaks up the light component from the prismatic glass block, preventing reflected glare.

The photo shows three (of four) 2′ x 4′ recessed Beta-Plex units mounted almost in the center of the ceiling, under which the low point of daylight falls. For schools whose classrooms are used at night, a different arrangement of Beta-Plex units is recommended, with separate circuits and switches to permit full (night) or partial (day) use. For an illustrated, descriptive 8-page folder on Beta-Plex, write to The F. W. Wakefield Brass Company, Vermilion, Ohio. In Canada: Wakefield Lighting Limited, London, Ontario.

Wakefield **Over-ALL Lighting**

Avoncraft presents

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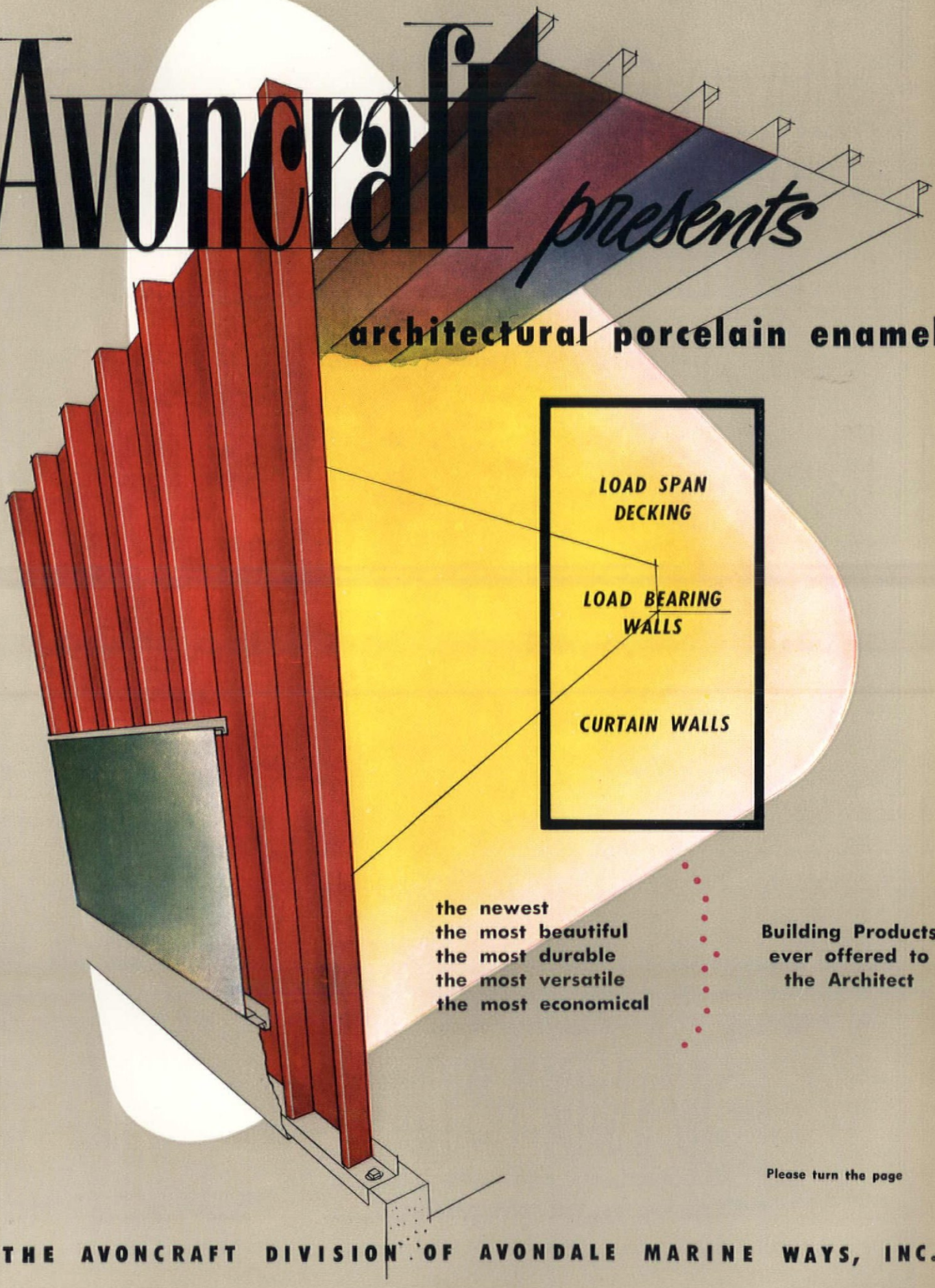

LOAD SPAN DECKING

LOAD BEARING WALLS

CURTAIN WALLS

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the most economical

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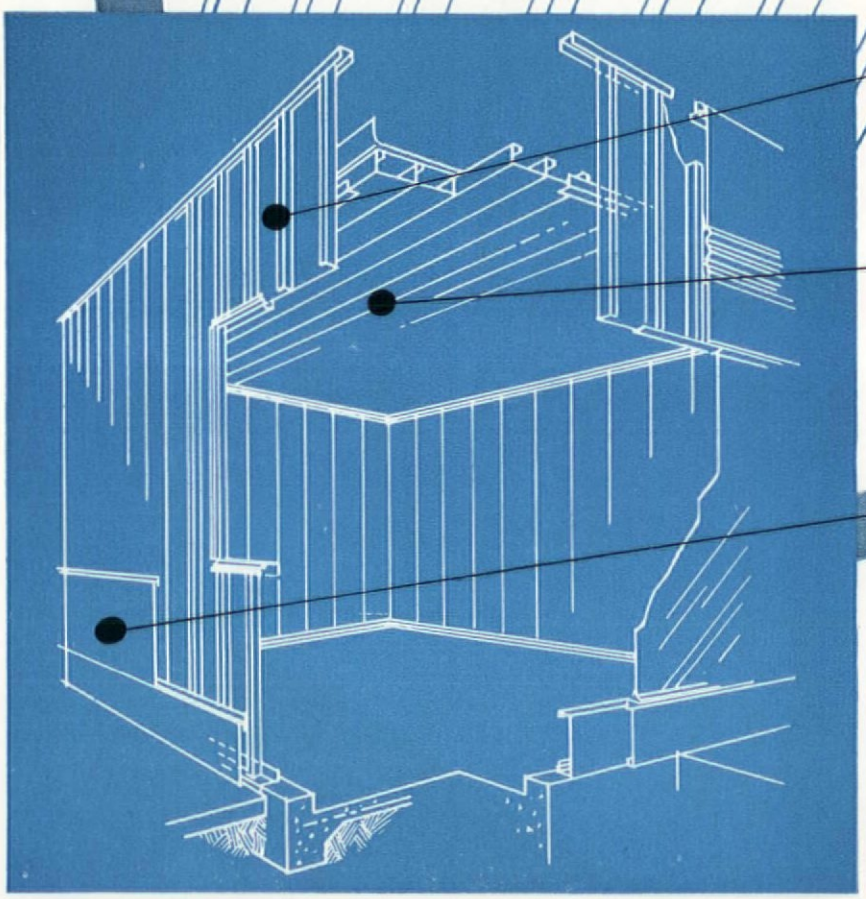

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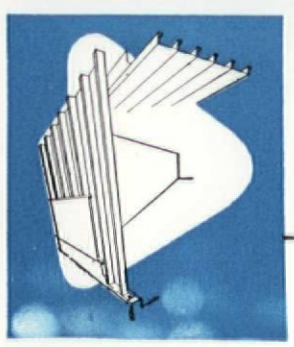

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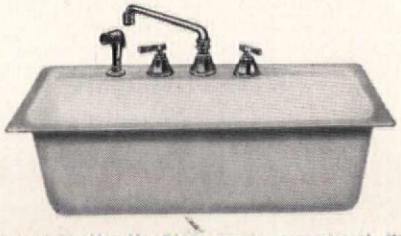
Richmond Serbin No. 1585—Double compartment, double drainboard with ledge-back. Sizes: 72" x 25" and 60" x 25". **Servilla No. 1535**—Single compartment, double drainboard with ledge-back. Sizes: 60" x 25" and 54" x 25". **Seymour No. 1537**—Single compartment, double drainboard with ledge-back. Sizes: 60" x 22" and 54" x 22".

the modern line of enameled cast iron sinks

for every type of installation

Richmond Schenley—Single compartment, single drainboard with ledge-back. Size: 42" x 25". No. 1550—Left drainboard. No. 1552—Right drainboard. **Sewanee**—Single compartment, single drainboard with ledge-back. Size: 42" x 22". No. 1554—Left drainboard. No. 1556—Right drainboard.

Richmond Shelton No. 2115—Double compartment, flat rim with ledge. Sizes: 42" x 21" and 32" x 21".



Richmond Stratton No. 2110—Single compartment, flat rim with ledge. Sizes: 30" x 21" and 24" x 21".

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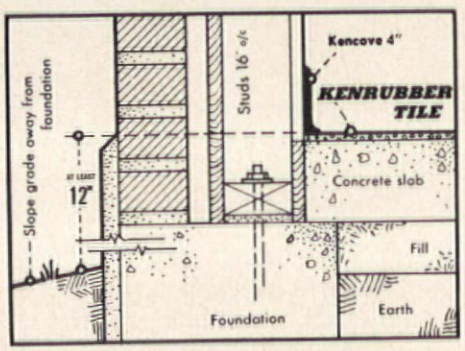
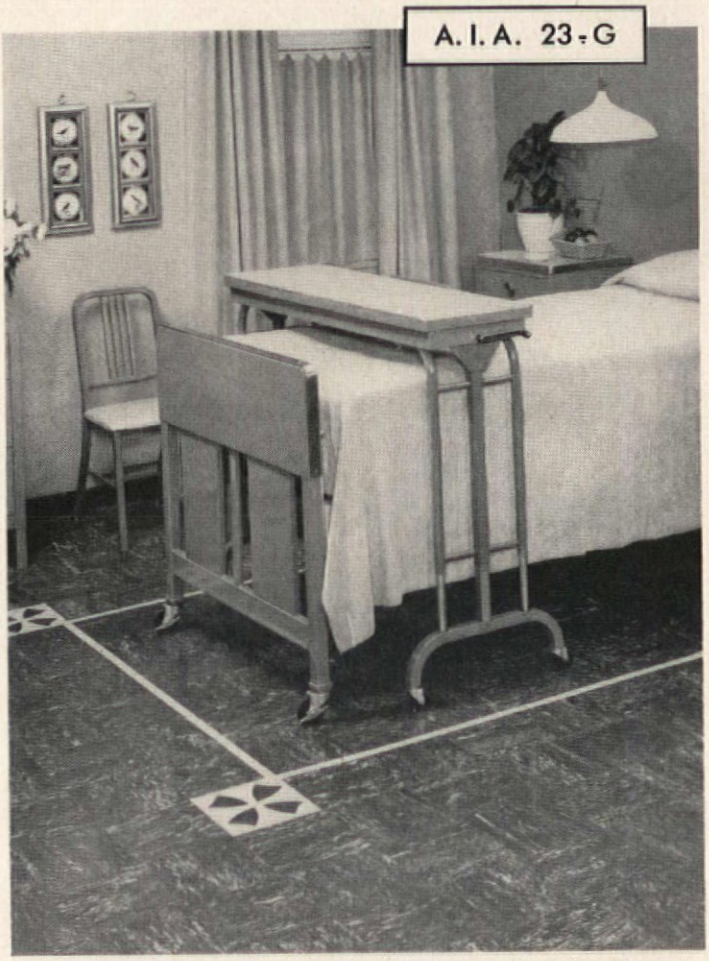


Above diagram shows approved installation of KenRubber over concrete in contact with the earth.

A.I.A. 23-G



KENRUBBER TILE FLOORS can be planned and designed to fill any decorative or functional need. For instance, the ThemeTile and Feature Strip shown in a private room here can easily and economically be installed in wards and corridors for directional lines, traffic lanes and area demarcations.

SPECIFICATIONS AND TECHNICAL DATA

Installation: Over any smooth, firm interior surface removed from greases and oils. New KenSet Adhesive* makes possible fast, easy and economical installation over concrete in contact with the earth.

Thicknesses: KenRubber is available in .080" (standard gauge) and 1/8" gauge for normal flooring demands ...3/16" gauge for extra-heavy duty applications.

Sizes: Standard tile size is 9" x 9"...with a wide range of special sizes available on order.

Approximate Installed Prices (per sq. ft.)

	Standard (.080") Gauge	1/8" Gauge	3/16" Gauge
KENRUBBER	50¢	65¢	80¢

These costs are based on a minimum area of 1,000 sq. ft. over concrete underfloor. Cost of KenRubber's *exclusive* die-cut ThemeTile inserts available on request.

Samples and technical literature available to accredited architects, builders and designers. Get them from your Kentile Flooring Contractor or write the nearest office listed below. Be sure to request samples of exclusive ThemeTile, colorful Feature Strip and KenCove, all-purpose, flexible cove base.

KenRubber is the floor your clients know and want...
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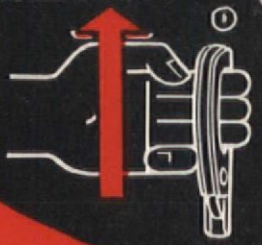
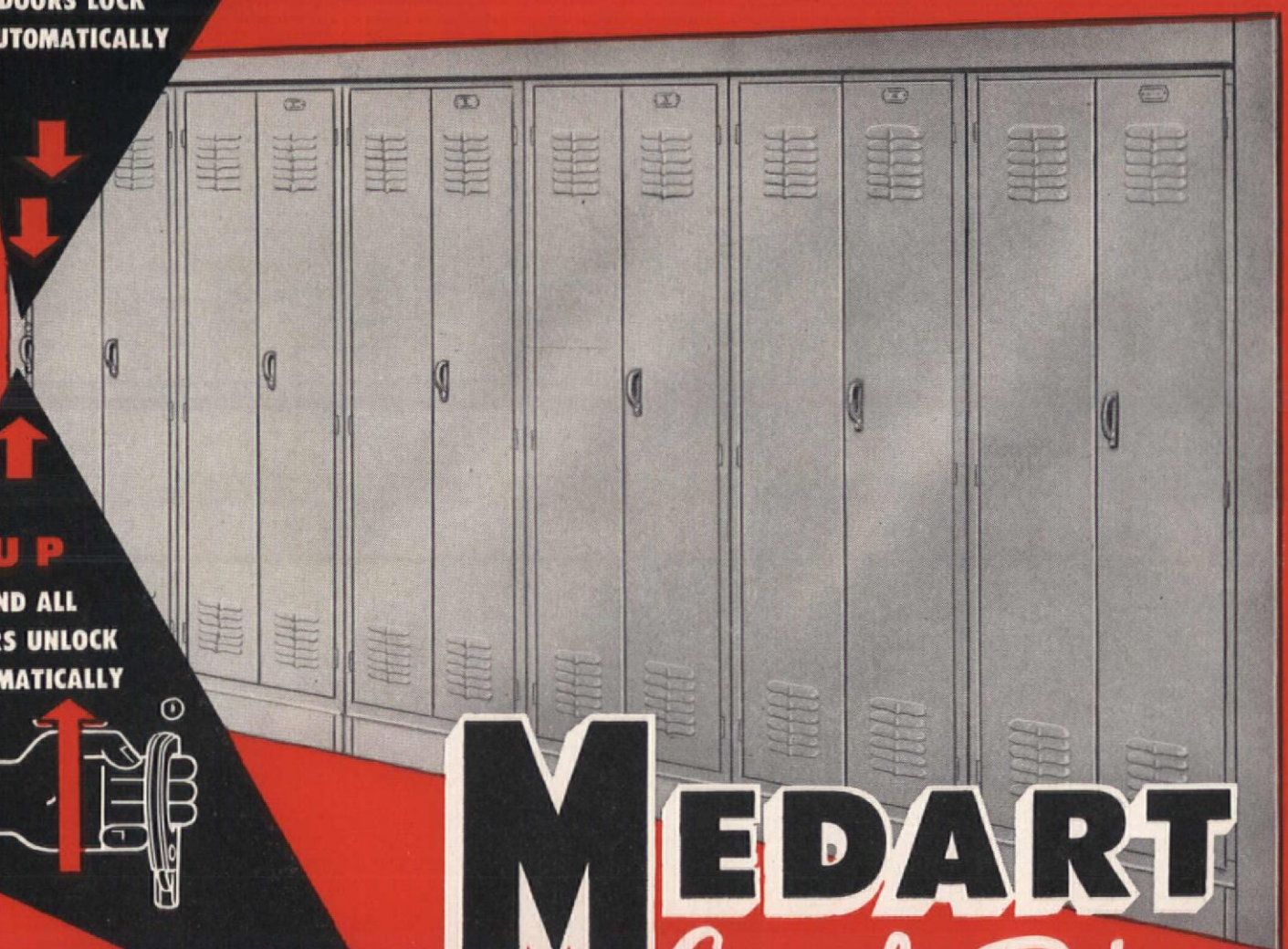


UP
AND ALL DOORS UNLOCK AUTOMATICALLY



MEDART Grade Robes*

▼ When master control is unlocked, individual doors can be opened and closed at will — when locked, individual doors can be closed and will lock automatically because of positive *3-point* pre-latching.

SEE OUR CATALOG IN SWEET'S

†Grade-Robes for free-standing installation are available for pre-built bases or with legs.

*Patents Pending

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and

KEWANEE reserve plus rating

mean to the architect . . .

■ Once in a great, great while an industry announcement has significance far beyond the usual. We at Kewanee-Ross believe the Big Truth about boilers and Kewanee Reserve Plus rating to be one of the most important precepts of business we ever presented.

Kewanee Reserve Plus rating *guarantees* dependability, flexibility, higher efficiency, lower costs, longer boiler life because it means "cruising speed" operation. So when you consider boilers, remember the Big Truth . . . ***"*the only safe way to specify boilers is on nominal capacity to operate at 'cruising speed'."***

Here is how Kewanee Reserve Plus benefits the architect:

1. Specifications are made with confidence because guesswork is eliminated.
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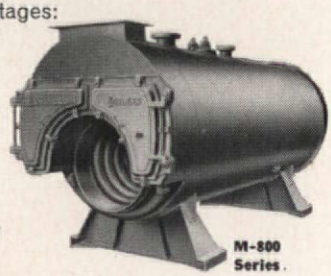

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There is a difference in MATICO Parquetry tile flooring. It's different in appearance . . . rich, luxurious, in perfect keeping with any style of architecture or decorative plan. There is a difference in cost, too. For all its richness and beauty, MATICO Parquetry costs no more than *ordinary* asphalt tile flooring. And Parquetry is durable . . . stain and water-resistant . . . easy to clean . . . can be installed on, above or below grade and performs efficiently over concrete slab foundations.

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An Acoustical Tile Ceiling that "Stays Put"

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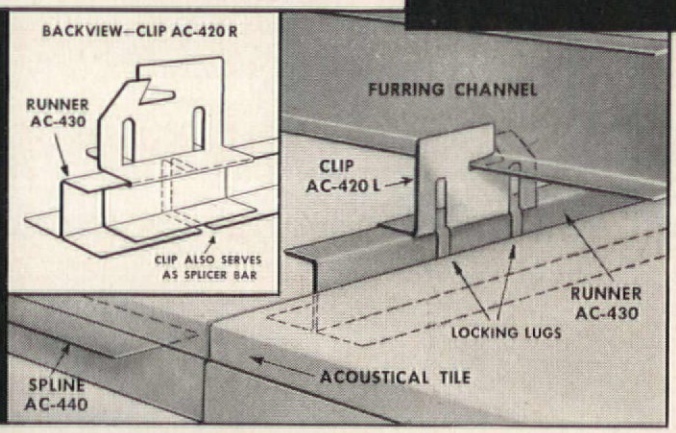
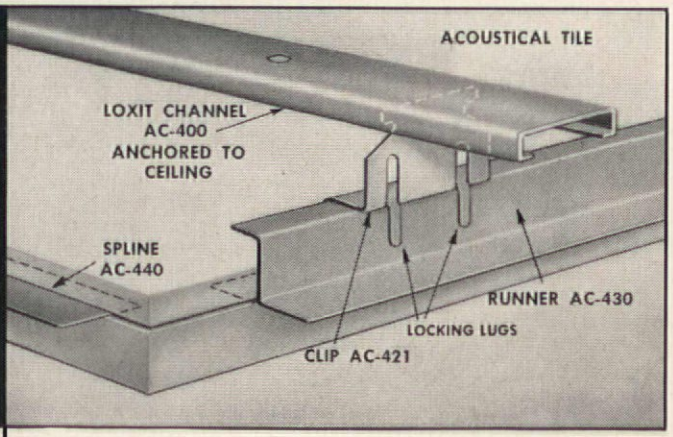


THE LOXIT VICTORY SURFACE APPLIED ACOUSTICAL SUSPENSION SYSTEM



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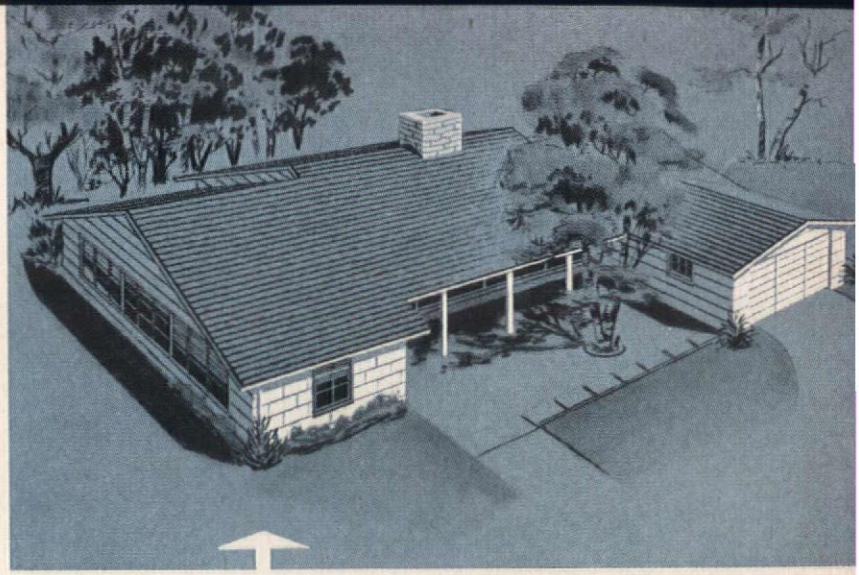

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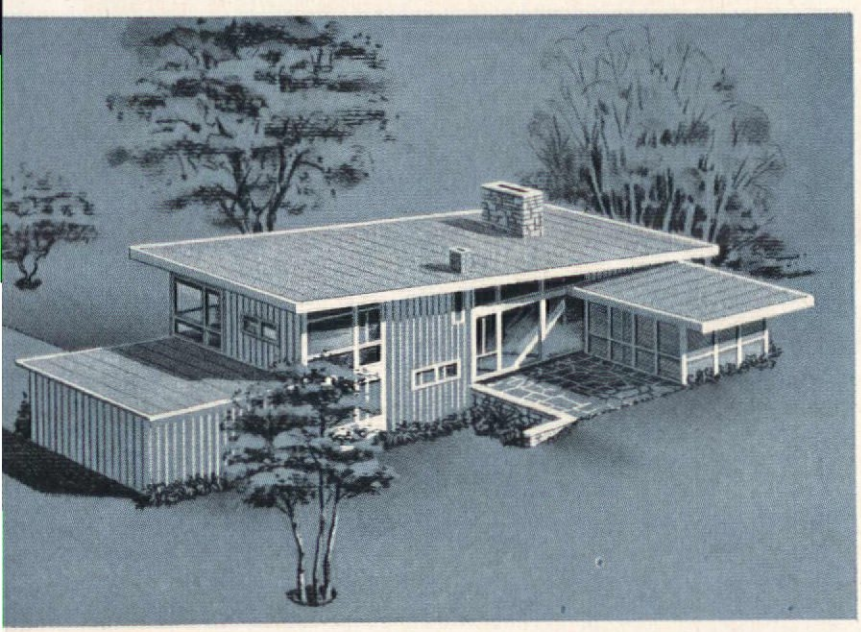

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permits use of *strip shingles* on low sloped roofs, with either Standard or Custom application. It is ideal for ranch houses and other types of contemporary structures where roof slopes are within the range of 2″ to 4″ per foot.

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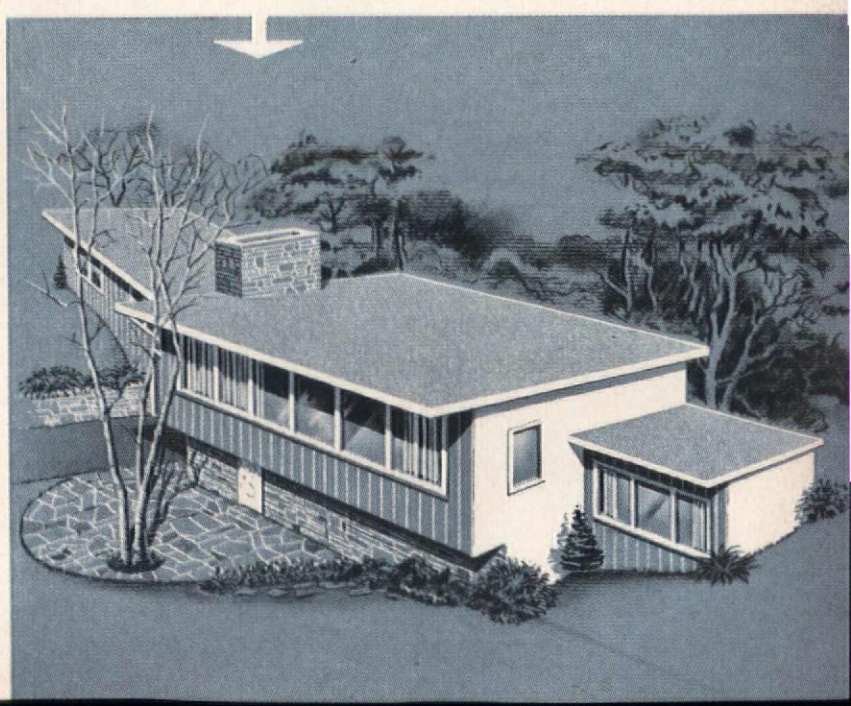
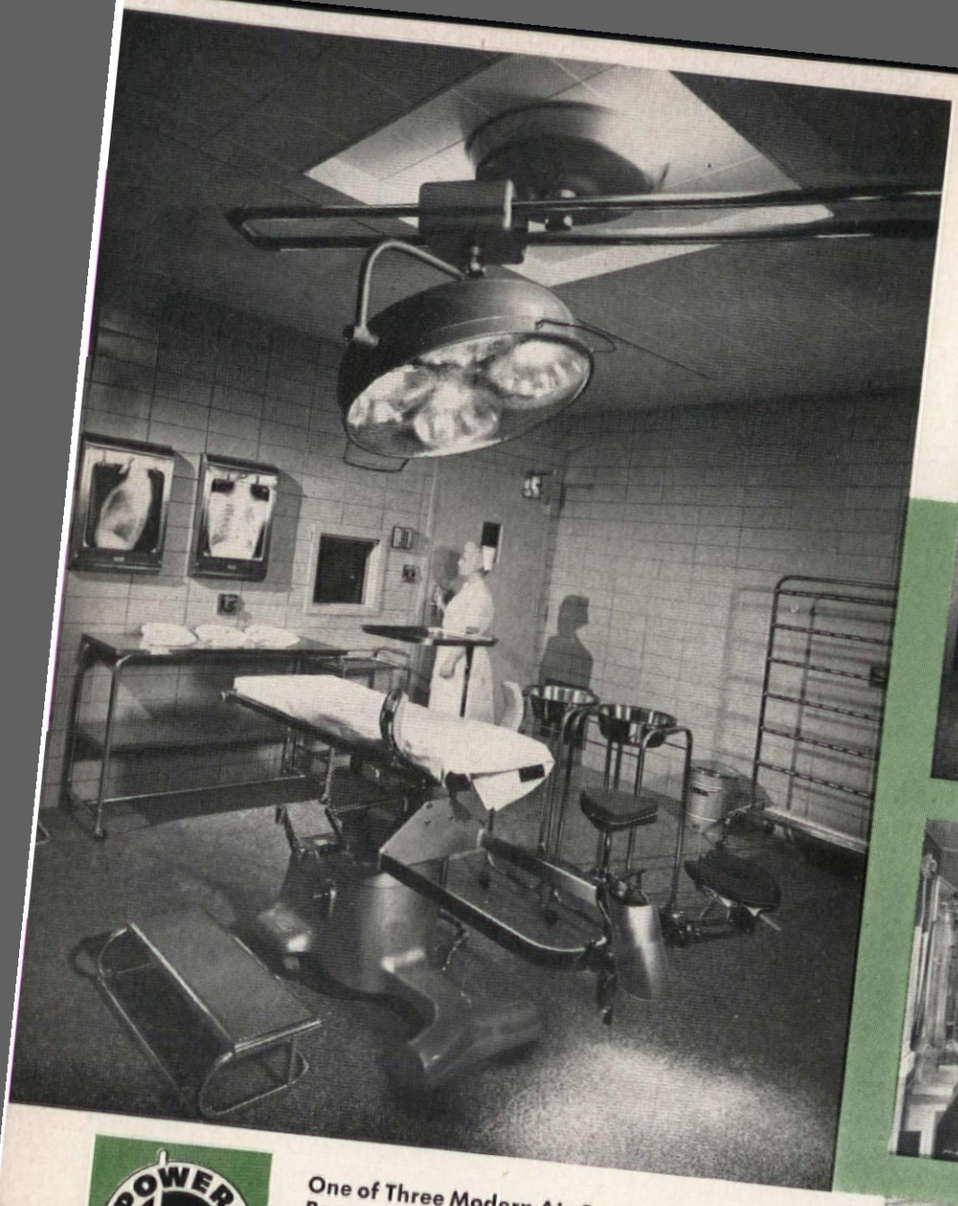
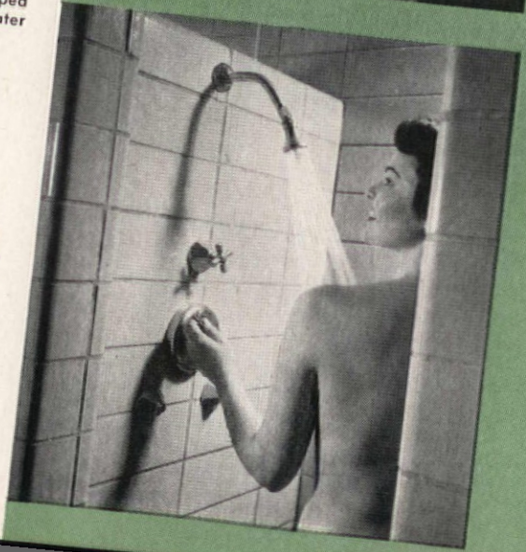


Temperature





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TEMPERATURE AND HUMIDITY

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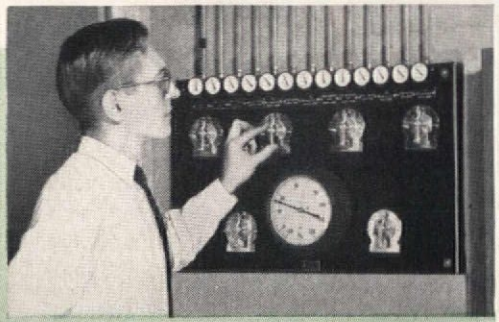

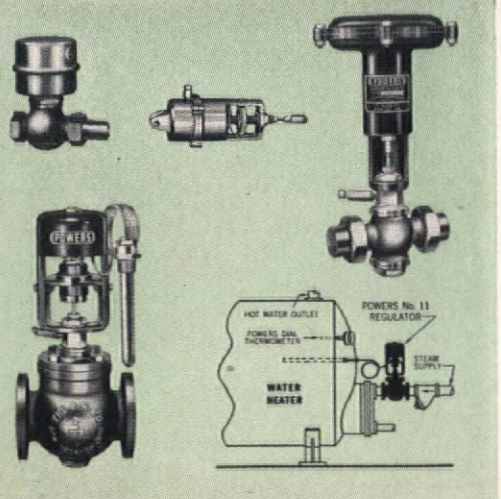

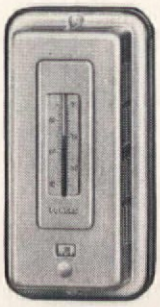

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No other firm but Powers can supply the great diversity of temperature controls now required in modern hospitals for heating, air conditioning, blood banks, hydrotherapy, shower baths, dishwashers, laundry dryers and all types of water heaters. Only a few of our complete line of controls used in the above building are shown.

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(b49)

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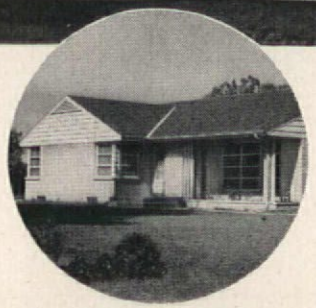

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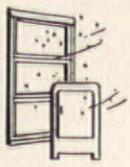

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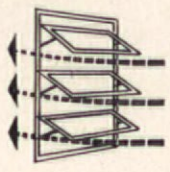
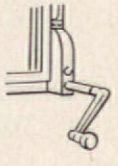


COOLER IN SUMMER - - Draft-free air circulation that can be regulated and directed to make greater use of natural ventilation.



EASIEST TO OPERATE - - Friction-free, precision balanced design utilizes sash weight to make Auto-Lok easiest of all to operate. Roto or Control-Bar operation.

LUDMAN LEADS THE WORLD IN WINDOW ENGINEERING

STERILE SUPPLY ROOM in the new St. Francis Hospital, at Lynwood, California. Mr. H. R. Davies, Architect. Repeated rows of open shelving, above drawers and enclosed cabinets, and an unbroken stretch of counter surface covered with a one-piece Formica counter-top, permit this room to service the entire hospital efficiently and economically. All cabinet work is custom-built, of steel, Bonderized and given a durable baked enamel finish, and was installed by St. Charles Manufacturing Company.

SPECIFY *St. Charles* HOSPITAL CASEWORK

It is St. Charles business to translate, literally, into steel your blueprint designs and specifications for hospital cabinetry and casework, without losing a line or an inch of your original intent. Long years of experience, highly skilled personnel, and America's most modern sheet-steel cabinet plant combine to make your complete satisfaction a certainty.

In addition, it is possible that our wide range of special units and accessories can add even more utility to your designs than you had, perhaps, anticipated. This might well apply, also, to our facilities for fabricating long lengths and irregular shapes of seamless, one-piece counter tops, of various materials, bonded onto steel cores.

Your inquiry will bring complete details regarding our service, together with whatever degree of assistance you might wish in original layout and design.

St. Charles-equipped Hospital, Sheridan, Wyoming, featured in this issue of Architectural Record. Fisher & Fisher: Architects

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casework • sinks and counters • special purpose units

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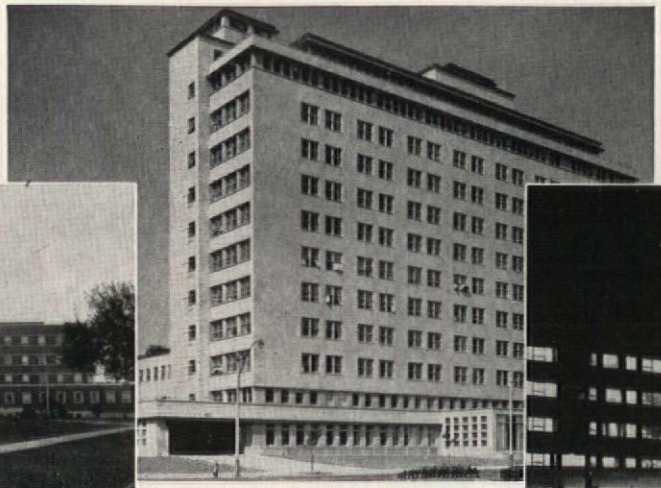
NEW ORLEANS • TORONTO • PHILADELPHIA

A MODERN TRIO OF "*Castle* HOSPITALS"

Architects: Favrot, Reed, Mathes & Bergman.

▼ New Orleans

Mercy Hospital, New Orleans, one of the fine new hospitals of the South, built by Sisters of Mercy who operated Mercy-Soniat Memorial Hospital in New Orleans for many years.



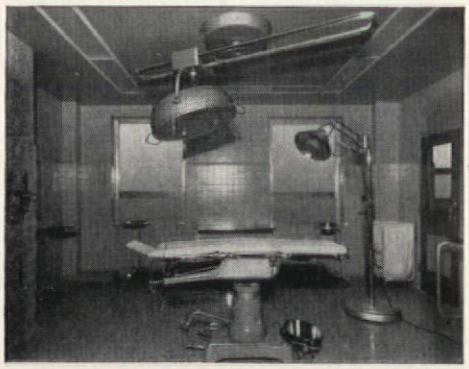
Keeping pace with Toronto's growth, the new Mount Sinai Hospital provides the most modern medical and surgical facilities available.

Architects: Kaplan & Sprachman.
Associates: Govan, Ferguson, Lindsay, Kaminker, Maw, Langley & Keenleyside. Toronto

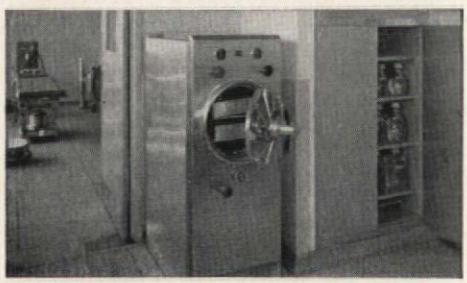
Architect: Vincent G. Kling.

▼ Philadelphia

One of the new and luxurious hospitals in the East, Lankenau Hospital, Philadelphia, is designed to establish a new pattern of hospital care.



MERCY—typical operating room in this modern institution is equipped with Castle overhead major surgical light and explosion-proof floor light.



MOUNT SINAI—Sub-sterilizing room between operating rooms showing carefully planned installation of cabinet-type Castle Hi-Speed Instrument Sterilizer and Liquid Heating Cabinet.

GIANTS ALL—these cities and their hospitals! Mercy, Mt. Sinai, Lankenau—each miles apart—yet each with a single common purpose—the care, healing, protection of its own.

In New Orleans, Toronto and Philadelphia these three have risen to help carry on the work of older hospitals.

Because they are modern, progressive, the equipment which goes into them is modern, modern in concept, modern in design.

These three are "Castle Hospitals."

LANKENAU—Castle recessed Hi-Speed Instrument Sterilizer, Water Sterilizer and Instrument-Washer Sterilizer in unique operating room arrangement.

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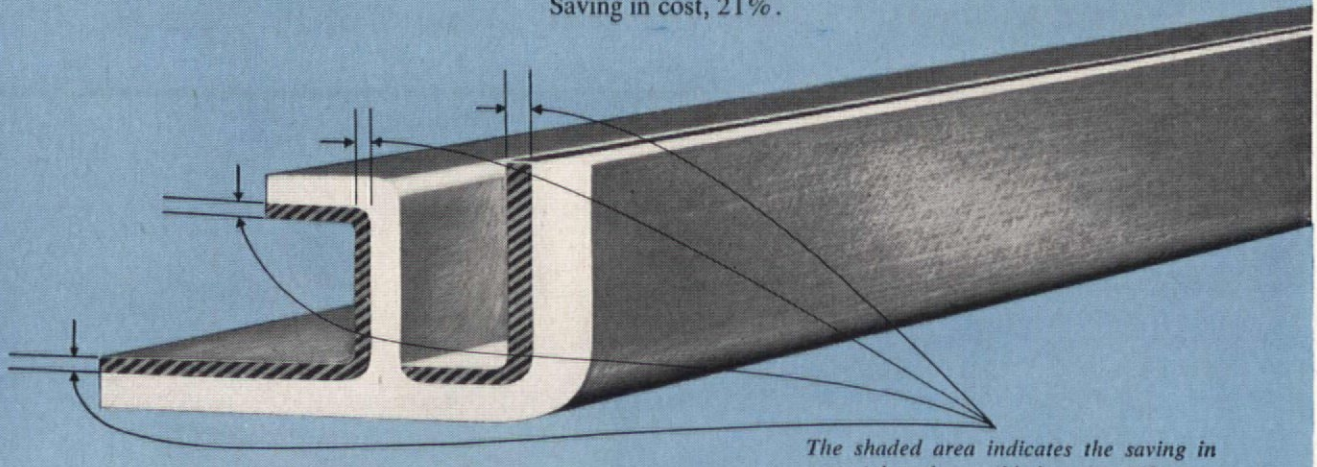
here's how you save

The high yield strength of 66S permits you to reduce the cross section of structural members. This means real dollar savings in material costs. The extrusion below was made of 61S. By using the high yield strength of 66S its cross section is reduced as shown. The saving in material amounts to approximately 26%. Saving in cost, 21%.



The shaded area indicates the saving in material made possible by using 66S.

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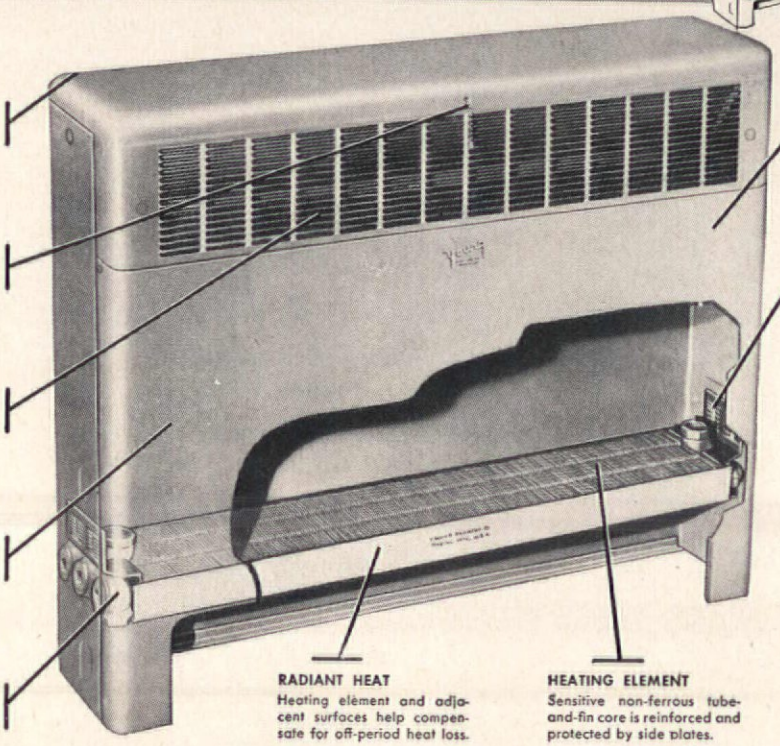
Take a look inside a Young Convector. Right away, you'll see many "hidden values" in Convector design features and construction quality. Such built-in value places Young Convectors in a class above the ordinary . . . assures easy installation, heating comfort and economy.



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DAMPER CONTROL
Chain control regulates damper and rate of air flow thru cabinet and heating element.

OVER-SIZE GRILLE
Louvers direct air outward and permit abundant heat delivery . . . greater capacity.

MODERN CABINET
Finished in prime coat . . . can be painted to match décor . . . safe, rounded corners.

SIMPLIFIED PIPING
Cabinet knock-outs and header casting design permit piping from top and bottom.

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Heating element and adjacent surfaces help compensate for off-period heat loss.

HEATING ELEMENT
Sensitive non-ferrous tube-and-fin core is reinforced and protected by side plates.

EASY TO CLEAN
One-piece front panel is easily removed for seasonal cleaning.

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Provide quick installation and pitching adjustments. Hold heating element securely.

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Reinforced, stapled cartons protect convectors. Marked for easy identification.

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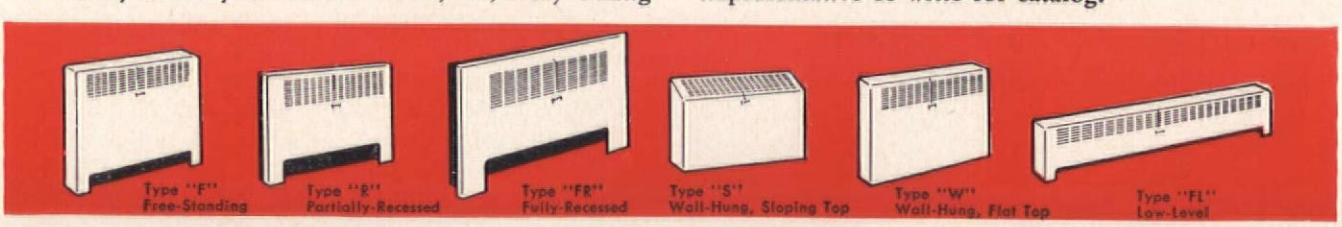
The ratings of Young Convectors have been determined in conformance with Commercial Standard CS 140-47, as developed cooperatively by the trade and the National Bureau of Standards, U. S. Department of Commerce, and the said ratings have been approved by the Convector Rating Committee.

Whether you specify or install heating equipment, you'll be way ahead with Young Convectors. Only Young offers all the design features shown above. Young supplies Convectors at low initial cost, with six standard types available from stock to meet early delivery dates. Remember, too, every Young Convector has been rated and approved in conformance with Commercial Standard CS140-47. These advantages all add up to greater convenience for you . . . greater satisfaction for your clients or customers. For further details, see nearest Young Representative or write for catalog.



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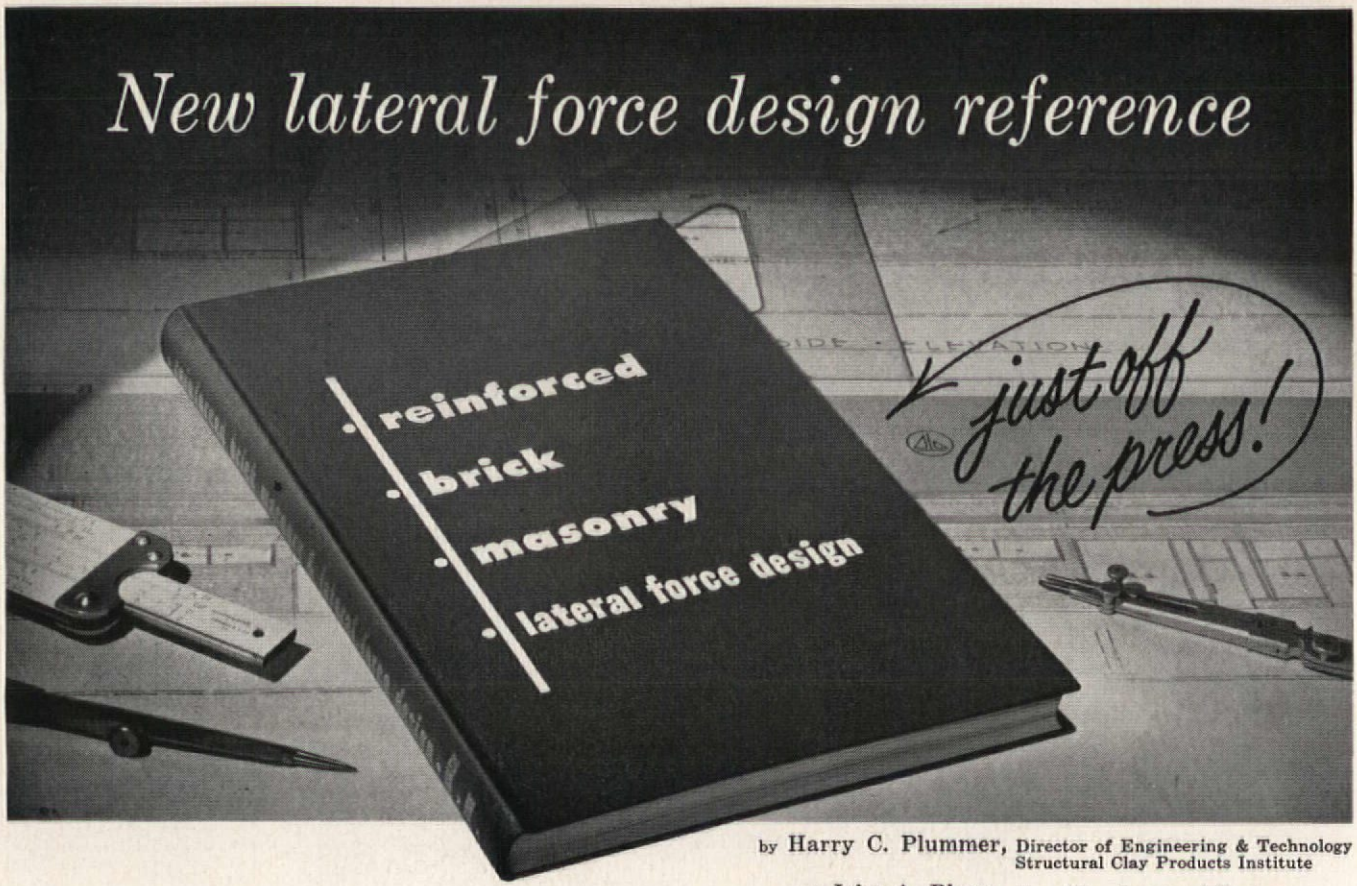
All Young Convectors are packaged in clearly marked, reinforced cartons for unit protection and ease in identification on the job. Adjustable support (see above) also holds heating element rigidly in place and permits shipping element in cabinet for quicker installation.

New lateral force design reference



by Harry C. Plummer, Director of Engineering & Technology
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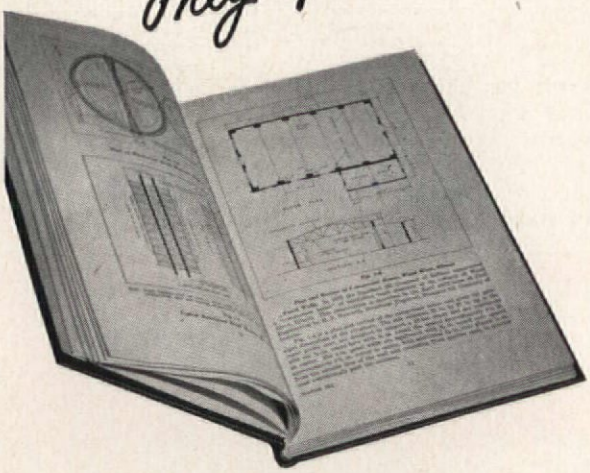

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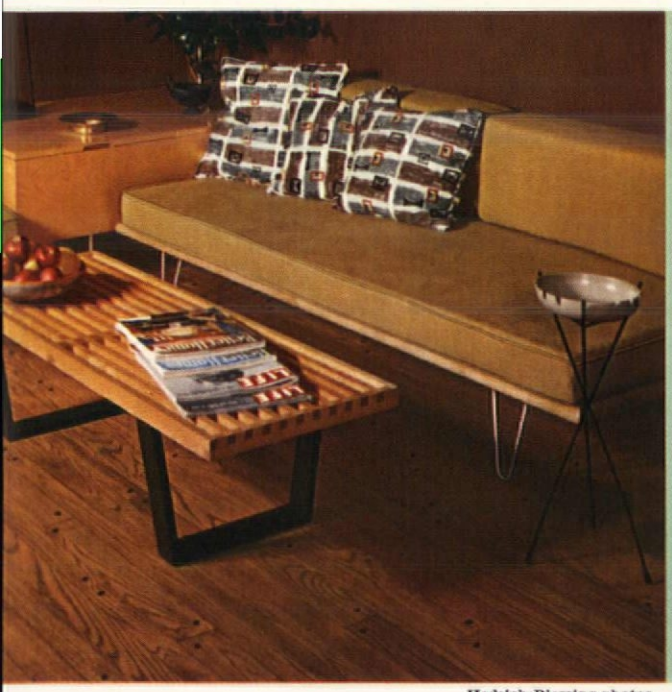

Right: **LIVING ROOM, Bruce Blocks**

The smart parquetry design of this oak floor adds natural charm to contemporary architecture. Bruce Blocks (prefinished or unfinished) can be installed over wood or concrete.

Left: **RECREATION ROOM, Bruce Ranch Plank**

With alternate widths and inlaid walnut pegs, this distinctive oak floor has the charm of a random-width floor—yet costs much less. It's pegged and finished at the factory.

Below: **BEDROOMS, Bruce Strip**

Natural beauty of grain and color makes this ever-popular floor an ideal background for modern room decoration. In Red Oak, White Oak or Beech—prefinished or unfinished.

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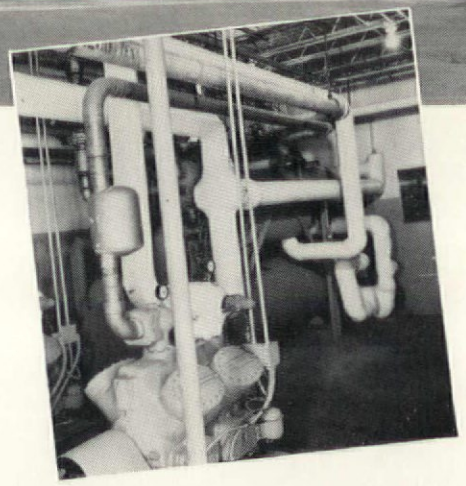
Acme furnished the package for RYAN BUILDING 100-TON COOLING SYSTEM



CONTRACTOR — Art Calvert Sales & Service
CONSULTING ENGINEER — R. L. Duffer

When the Florida Power & Light Company decided to air condition its Ryan Building offices in Miami, Florida they took the easy way of installing a system by using an Acme Flow-Therm Packaged Water Chiller. This unit consisting of a two-circuit Acme Dry-Ex, two Acme HX Heat Exchangers, and two Acme STF Condensers furnishes 300 GPM of 46° water to the system. It is used in conjunction with two 50 HP Carrier Compressors.

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The Flow-Therm is the latest addition to the Acme line of air conditioning and refrigeration products. It is the answer to the contractor and user who wants the benefits of a packaged unit along with the chance to specify matching Acme components. It can be used with any model or make compressor. See your Acme representative for more information on the Flexible Flow-Therm.

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Mfgs. of a complete line of Air Conditioning and Refrigeration Equipment

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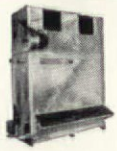
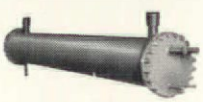
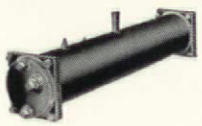


Evaporative Condensers
Cooling Towers
Floor-type Unit Coolers



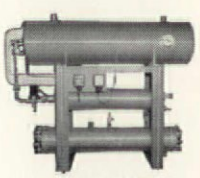
Direct Expansion (Dry-Ex) and Flooded Liquid Chillers

Heat Exchangers, Oil Separators

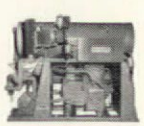


Shell and Tube, Shell and Coil Condensers

Receivers, Pipe Coils



Packaged Liquid Chillers to 225 tons



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New Methodist Gold Star Memorial Library and School of Religion building on campus of Oklahoma City University. Built in honor of the 1200 Methodist Oklahoma men and women who gave their lives in World War II and in Korea. Said to have the largest arc-welded steel framework in America, this building is roofed with the most beautiful, rugged, fire-safe shingles known—Carey Fire-Chex. Architect: Winkler & Reid, Inc., General Contractor: Lippert Bros., Roofing Contractor: C. C. Cooke Co.—Oklahoma City, Okla.

A roof of gray shadow-blend Fire-Chex asbestos plastic shingles protects this beautiful new university building from fire and weather . . . provides a crown of enduring beauty the years will never tarnish.

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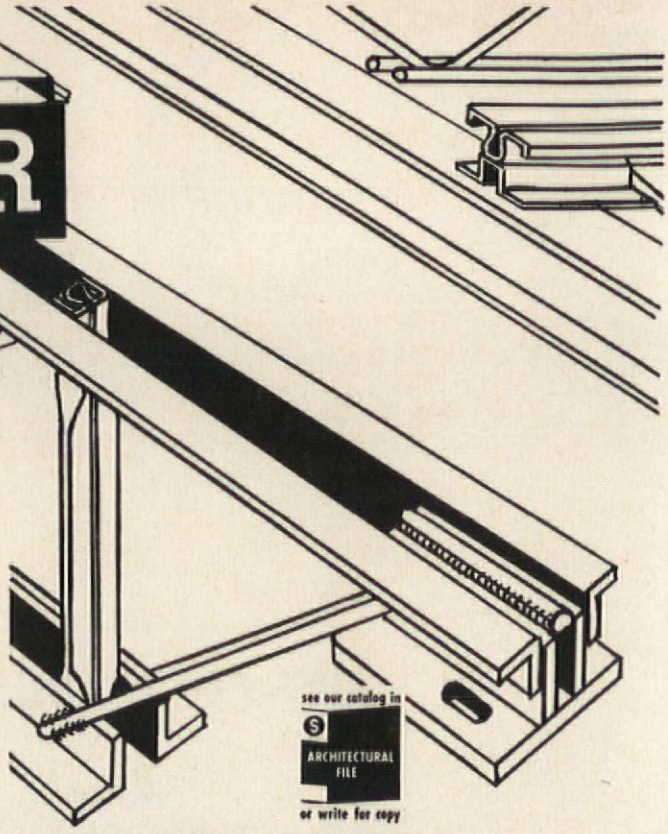

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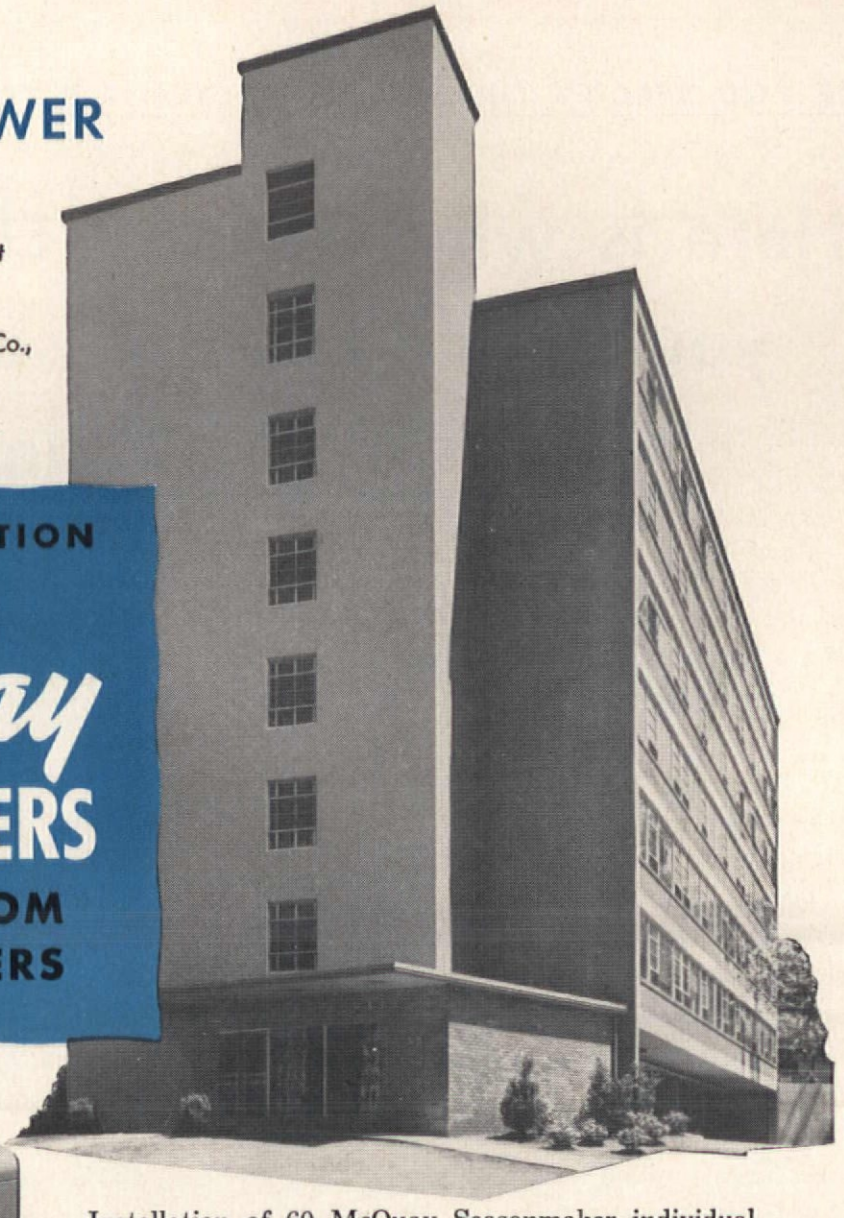

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IF YOU SPECIFY OR BUY FLUORESCENT FIXTURES:

Here is why General Electric believes you should insist on series ballasts for 96T12 lamps

Several years ago, our engineers studied the merits of the series-type ballast circuit for operating the 96T12 lamp at 425 ma. It showed real possibilities for economy, both in ballast cost and size. With concentrated efforts, a series ballast design for this lamp was perfected. Then for the first time, a series-type ballast circuit meeting all lamp requirements and giving full rated lamp life was made available to you.

Actually, there was nothing basically new about the series-type ballast. As early as 1940, our engineers had studied such a circuit. As new lamps were made available over the years, the series ballast was investigated time and again. However, prior to the 96T12 lamp, the potential savings of the series ballast circuit had been discarded because no way had been found to meet lamp operating requirements.

During those years the lead-lag ballasting circuit was widely used for the various types of lamps then available. Naturally, this type of ballast gained wide acceptance in the lighting industry as the standard of ballast quality.

After the 96T12 lamp was introduced, a series ballast was developed which proved to be the best ballasting tool for this important new lamp. However, there was real hesitancy about accepting a series ballast for the 96T12 because in the past, a lead-lag ballast had been found superior for other lamps.

We felt compelled to face this challenge and advocate the series ballast for the 96T12 lamp because, everything considered, we believe it is the best ballasting tool for that lamp—giving equivalent performance in accordance with lamp specifications and offering a very substantial saving in cost and size.

The results are now known throughout the lighting industry. Millions of series ballasts for operation of 96T12 lamps at 425 ma have been furnished to the industry in the last three years by ballast manufacturers. And because series ballasts for this lamp are inherently 20% less costly—even more millions of dollars in basic ballasting cost have been saved for fluorescent lighting users.

It will continue to be our policy to use our engineering know-how and detailed knowledge of lamp requirements to produce and promote the sale of the very best ballast or selection of ballasts for every type of lamp. Whether lead-lag, series, or trigger-start, in our sincere best judgment, they will always represent the best ballast design to meet lamp and industry requirements. General Electric Company, Schenectady 5, New York. 401-4

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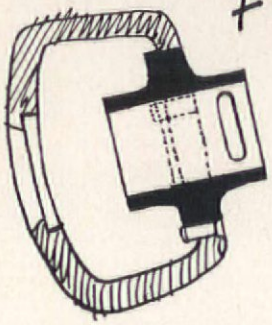
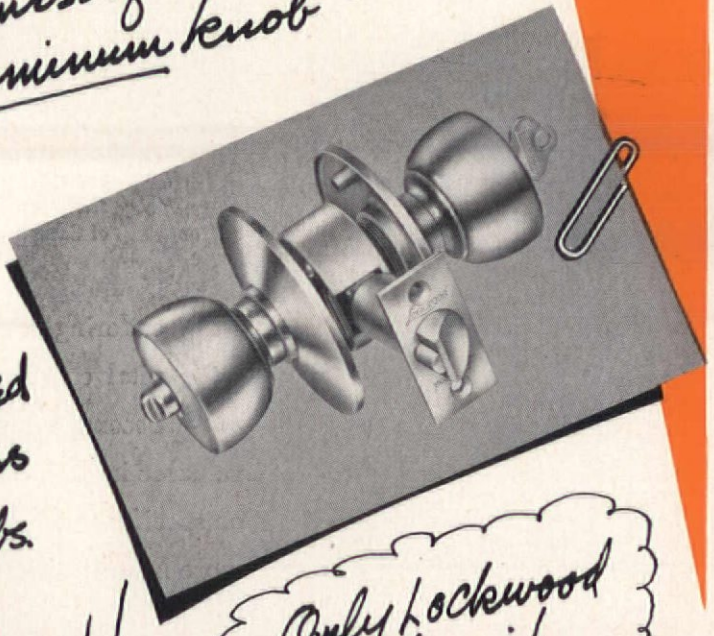
Lockwood has
FORGED BRASS SHANK



greater strength
longer wear
at critical stress points

Eliminates weakness of ordinary one-piece aluminum knob



Shank is interchangeable in cast or forged aluminum, brass or bronze knobs.

Sounds Good!

Only Lockwood has it

Lockwood

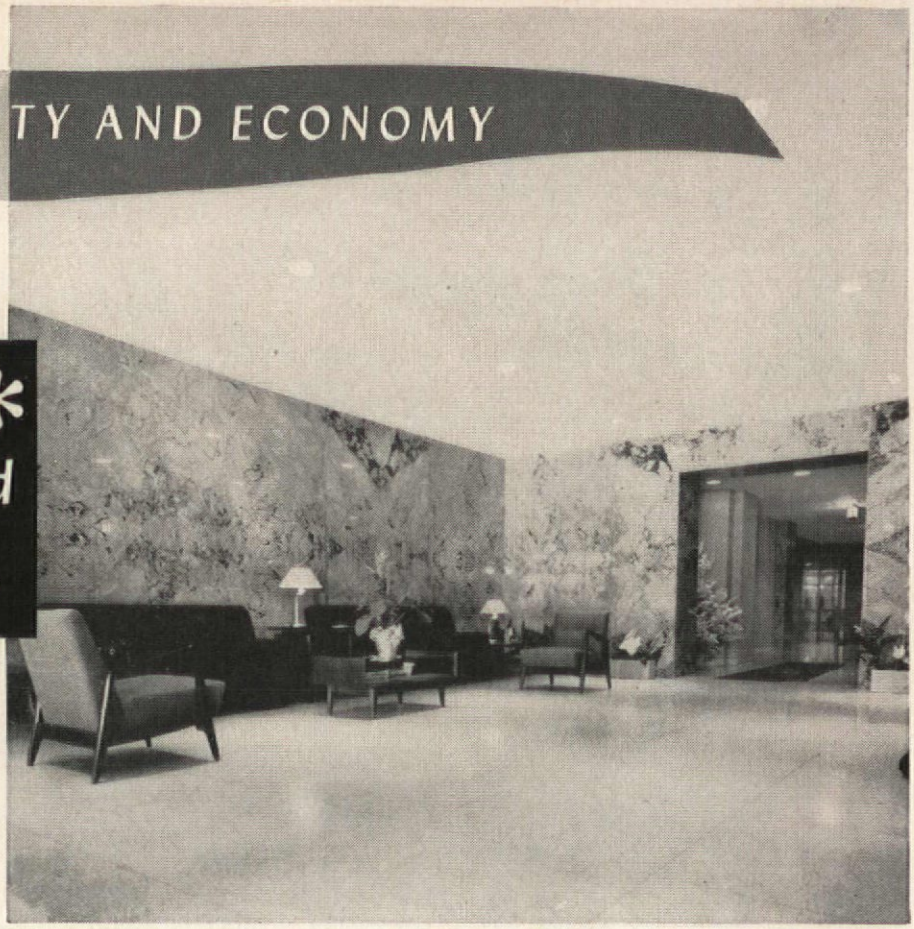
The mark of superior performance

LOCKWOOD HARDWARE MANUFACTURING COMPANY
Fitchburg, Massachusetts

NEW BEAUTY AND ECONOMY

at
RESURRECTION HOSPITAL
Chicago, Illinois

when Specialists* plan FLOORS and Floor Treatments.



HILLYARD Treatment Products Specified

For terrazzo—
White Onex-Seal
Super Shine-All
Super Hil-Tone

For rubber and asphalt tile—
Hil-Tex
Super Hil-Brite Wax
Hil-Sweep

* Schmidt, Garden and Erikson, Architects. E. W. Rupinski, Associate Architect. Rt. Rev. Monsignor John W. Barrett, Archdiocesan Director of Catholic Hospitals, Consultant.

Rendering a floor treatment planning service to architects, hospital consultants and administrators on a nationwide scale, has become a respected part of Hillyard's assistance. By submitting valuable information on new products, improved treating methods, help on specific floor problems, Hillyard provides specifications that assure more beautiful lifetime floors with a minimum of labor costs.

Hillyard's field staff of 120 trained floor experts (Hillyard "Maintaineers") © are stationed in key cities coast to coast. These men are "on your staff not your payroll" for statistical advice on costs, full product facts, "job captain" help on floors without charge to architect or hospital management.

ST. JOSEPH, MO. SEE OUR CATALOG IN SWEET'S HIA **Passaic, N. J. • San Jose, Calif.**

CALL OR WRITE FOR THE NAME OF THE HILLYARD MAINTAINEER NEAREST YOU.

ON YOUR STAFF . . .
NOT YOUR PAYROLL

The Filler Machine Company factory at Philmont, Pa., which has received national recognition as an outstanding example of low-cost construction in which quality was *not* sacrificed. Consulting engineer: Ralph Wesley Jones, Philadelphia.

ow-cost, blue-green window walls increase job comfort

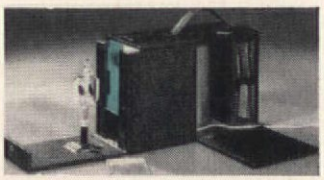
The problem of this building's designer was to prevent lower construction cost from interfering with quality, The factory window walls of Blue Ridge *Aklo** Glass typify the result.

Inexpensive to build, these translucent blue-green walls reduce summer heat while they bring in light. With *Aklo* Glass ⅛" thick, as much as 37% of the sun's heat can be shut out. With ¼" *Aklo*, the reduction is as high as 44%. That's why *Aklo* is so widely used on south and west exposures especially.

Frosted *Aklo* Glass subdues distracting, irritating glare, too. It softens and diffuses direct sunlight and sky brightness, dazzling reflections from ice, snow and other bright surroundings.

With *Aklo*, workers can produce more because working conditions are better. A building has more usable floor space, too, because *Aklo* Glass makes it more comfortable close to windows.

See *Aklo's* Benefits in Heat-In-Motion Test!



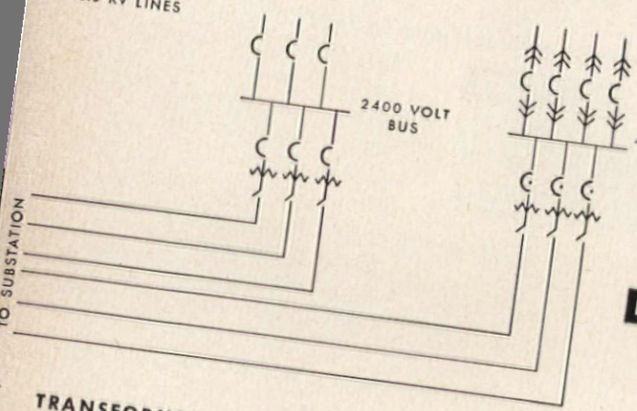
The Heat-In-Motion test gives you quick, conclusive understanding of the benefits that *Aklo* users enjoy. See it right at your desk. Your L·O·F Distributor or Dealer will be glad to give you this radiometer demonstration. He's listed in phone book yellow pages in many cities. Or write directly to Patterned & Wire Glass Sales, Libbey·Owens·Ford Glass Co., B-1534 Nicholas Bldg., Toledo 3, Ohio.

The booklet, "Filtered Daylight", is yours for the asking, too. *®

BLUE RIDGE
AKLO GLASS

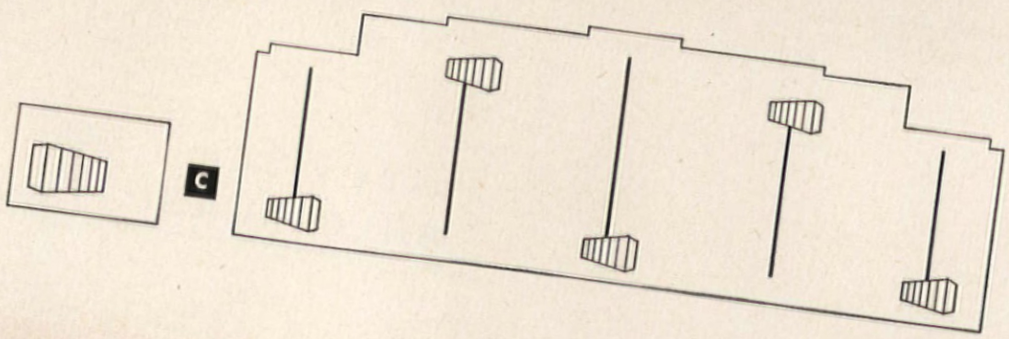
FILTERS DAYLIGHT

A



B

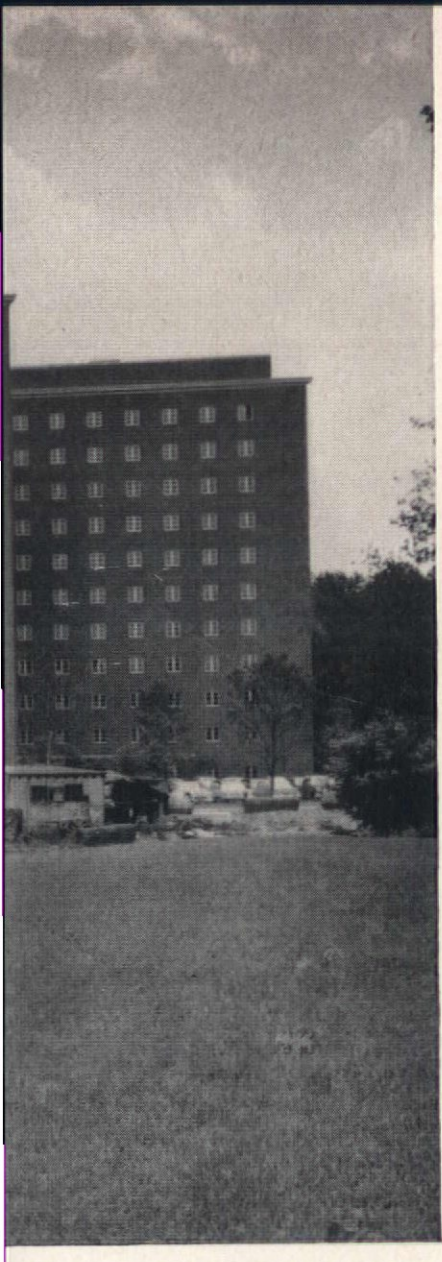
TRANSFORMER
BREAKER
NETWORK PROTECTOR



C

Power is supplied at 13.8 kv to:

(A) ALL SPOT NETWORKS throughout the project. Three feeders serve each power center. Should one fail, the other lines still serve all loads. If two fail, all nonessential load is dropped. If the third fails, all loads are dropped and only designated ones are supplied by a 5000-kva emergency turbogenerator set, located (B) IN THE POWERHOUSE. There, both 2400-volt and 480-volt service is available for power loads. (C) IN THE MAIN HOSPITAL, five spot networks feed all loads through bus duct risers.



Architects & Designers:
General Services Administration
Public Building Service

Electrical Contractors:
Harry Alexander, Inc., H. P. Foley Co.,
E. C. Ernst, Joint Adventurers
Electrical Construction

WORLD'S NEWEST RESEARCH HOSPITAL

U. S. Public Health Service's new National Institutes of Health at Bethesda, Maryland, is an excellent example of advanced hospital design—based on a sound functional program that covers both present and future requirements.

The entire architectural plan, in fact, reflects the Institutes' critical mission: to conduct research on virtually every known disease. All buildings have been designed specifically for that function. Result: ultimate in research and treatment facilities.

The key in this plan is the 500-bed, air-conditioned main hospital building, upper left. Here, treatment efficiency dictated floor layout. Practically every patient's room has been located adjacent to laboratory facilities.

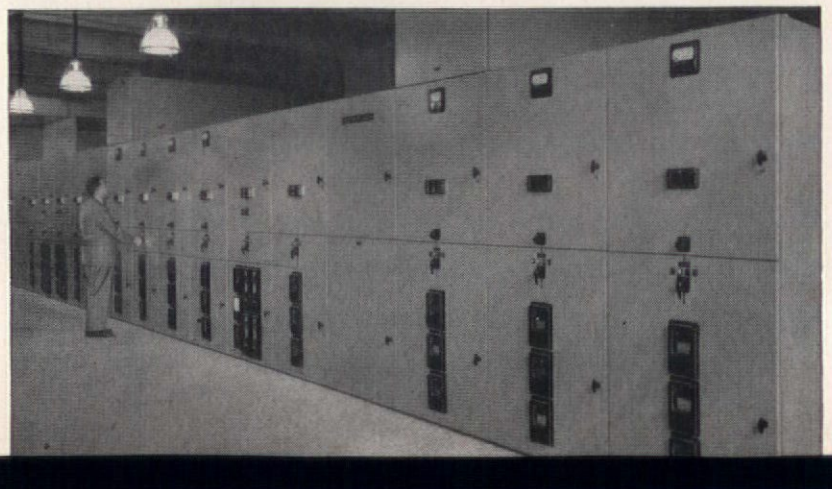
Future hospital requirements have also been adequately covered in the original plan. Without any additions to the building, present facilities can be expanded to 2500 beds in an emergency.

What makes a Functional Electrical System

Function again became the guide when a method for distributing electrical power was selected. After a complete analysis of the Institutes' vital assignment, the project's engineers adopted a spot network system, described at left. And, by matching it with the unitized distribution equipment covered on the next pages, the National Institutes of Health is assured uninterrupted electrical service . . . in all areas . . . with adequate provision for future expansion.

The construction application engineer in your nearest Westinghouse Office offers this same kind of planning help to you and your engineers. Call him for complete details. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa. J-94006

YOU CAN BE SURE...IF IT'S **Westinghouse**



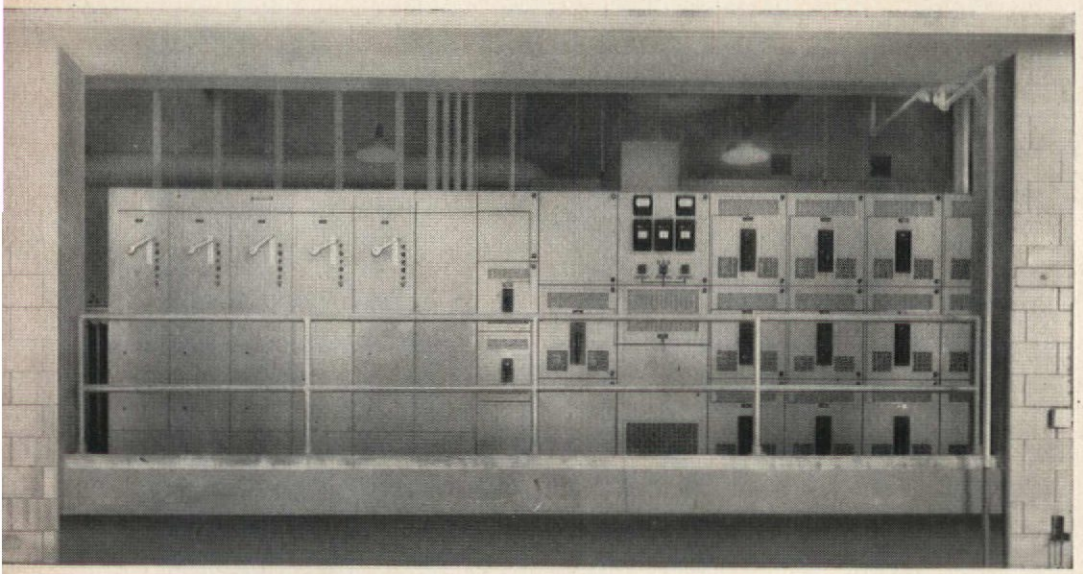
MAIN HIGH-VOLTAGE SWITCHGEAR feeds and protects 19 spot networks throughout the 15-building research center.

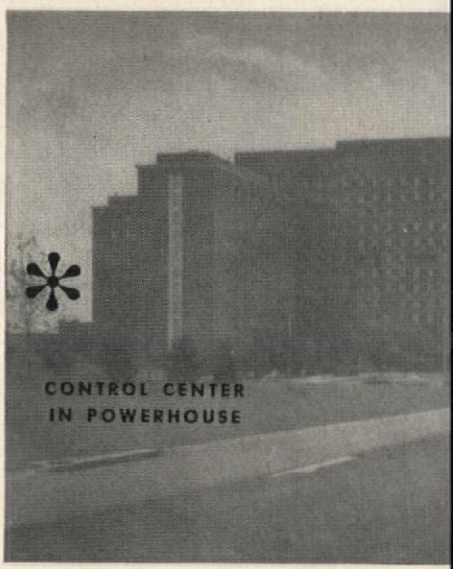
CONTROL CENTERS...FOR FLEXIBILITY...*a vital factor*

In the powerhouse, grouped motor control—in Westinghouse centralized control centers—contributes substantially to smoother operation of the hospital. All motor starting and circuit protective devices are housed in a neat bank of unitized, easy-to-service structures. In just a few steps, then, one man covers the extent of motor control for all air conditioning and other important service facilities. As a result, trouble-free and more efficient operation of these services is assured.

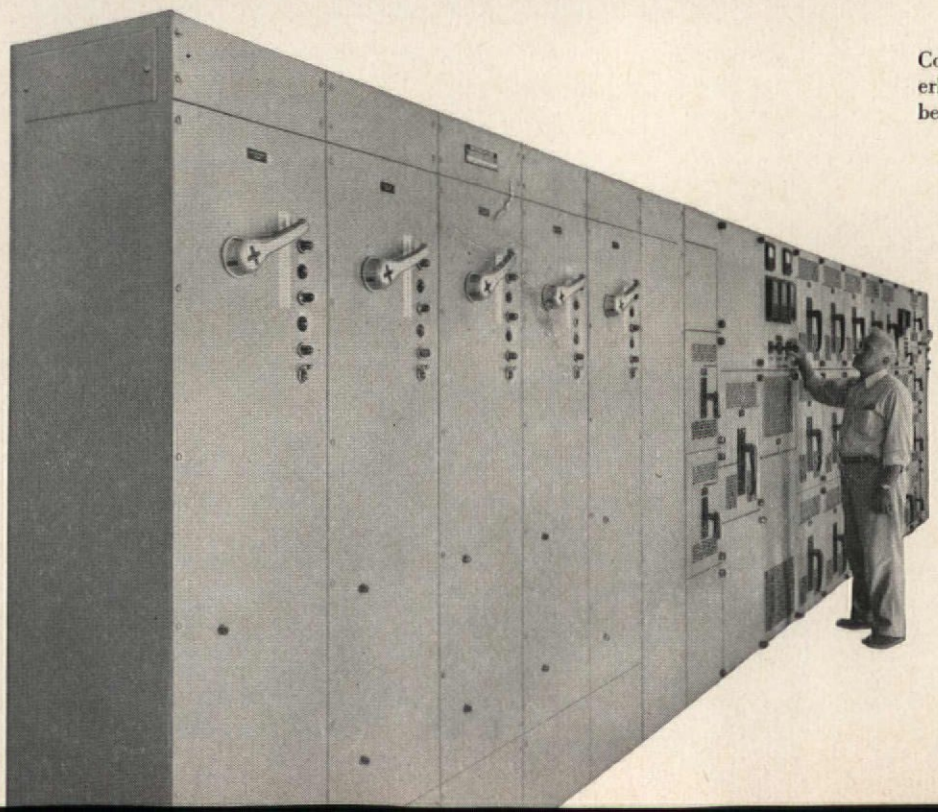
Complete flexibility of electrical components, as well as modular-constructed units, gives the Westinghouse Control Center ability to expand to any future needs of the research center. This type of structure may hold as many as five motor starter units and can be added to, moved anywhere, or repositioned as needed. Arriving at the National Institutes of Health completely assembled, wired and tested, the control center was ready to operate after a minimum of installation effort.

J-27040



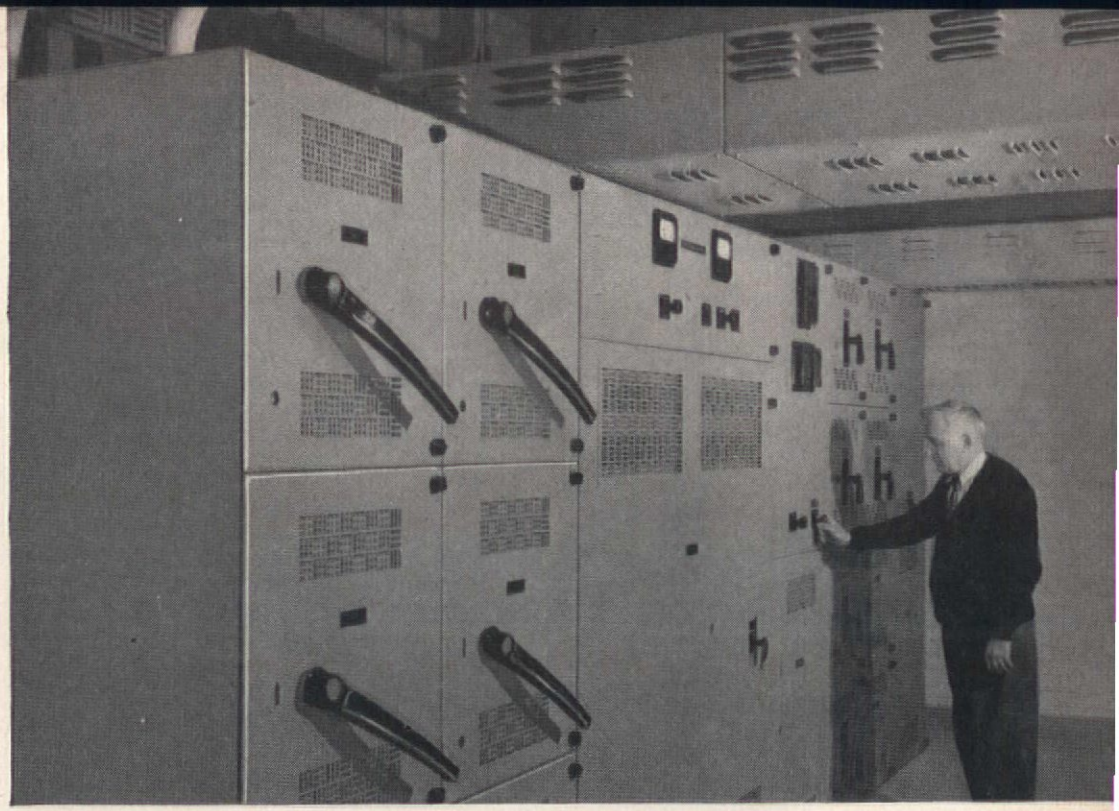


CONTROL CENTER IN POWERHOUSE



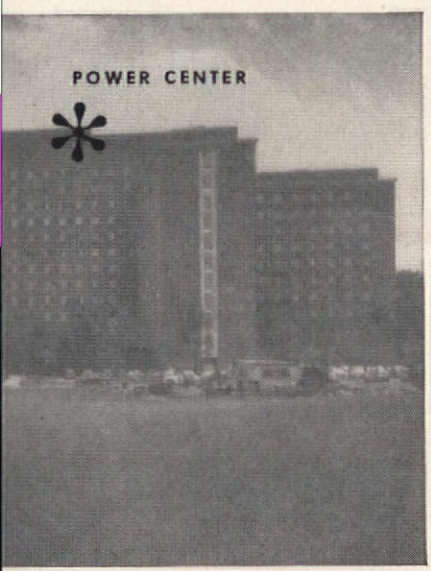
Control Center Balcony Location in the powerhouse allows the operator to see the motor, below, while inspecting its control unit.

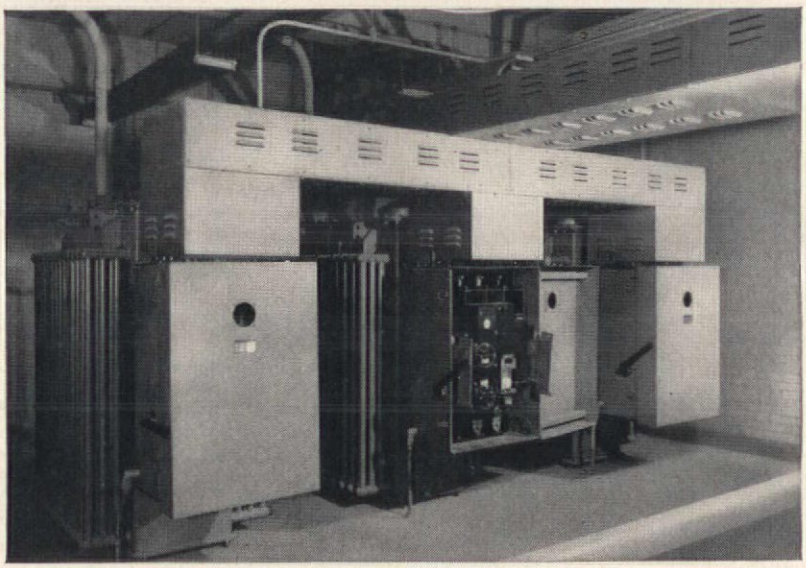
Installation Flexibility permits control center to be close-coupled to the power center, further centralizing the control equipment serving this area.



Modern power centers can be located at the center of load for most efficient and economical power distribution. At right is switching portion of power center.

Lower right. Here is transforming section of power center, showing the low-voltage network protectors.





HIGH SERVICE CONTINUITY AND ECONOMY...*designed in*

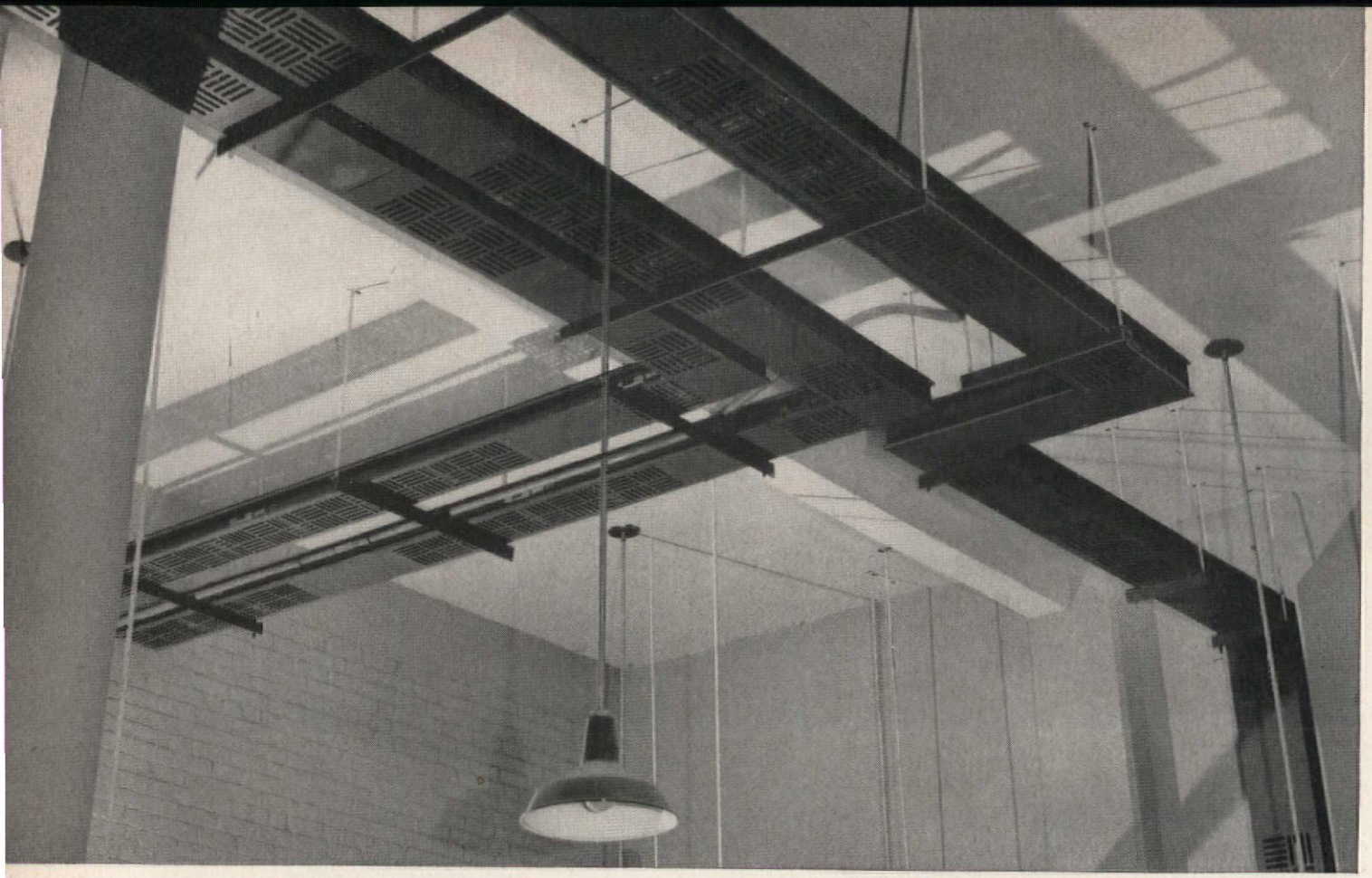
Electrical distribution facilities at the National Institutes of Health are matched to functional needs. The project's engineers designed a system that provides all research areas with exceptionally reliable service—and it does this economically.

Primary 13.8 kv feeders are carried throughout all buildings to spot network power centers. This reduces wiring costs and minimizes power losses.

One to five "spot-network" units have been located in every building to transform the high voltage down to utilization level. Each network contains three transformers. Should trouble develop on one, the other two carry the load. This not only assures excellent service continuity, but also spells out further savings. Since the transformers in the individual networks share one another's peak loads, smaller size units are permitted.

J-60848

YOU CAN BE SURE...IF IT'S Westinghouse



Sound, modern, compact

BUS DUCT IS FLEXIBLE

The power arteries of this hospital are Westinghouse Low-Impedance Bus Duct. It was a sound choice. For bus duct is the ultimate in modern, flexible power distribution.

Due to greater current-carrying capacity, bus duct required considerably less space than cable and conduit . . . carries power more efficiently. Standard, prefabricated sections coordinated perfectly with building plans . . . were quickly and easily installed. Bus duct is smart, modern in appearance . . . runs and risers blend smoothly into the interior design of the hospital. Best of all, bus duct is flexible—meets changing load demands; provides sufficient reserve capacity to handle future loads without expensive rewiring.

J-30167

Low-impedance bus duct riser carries power from low-voltage switchgear to panelboards, located in wire closets on each floor.

Space, safety, added load with

PLANNED-IN PANELBOARDS

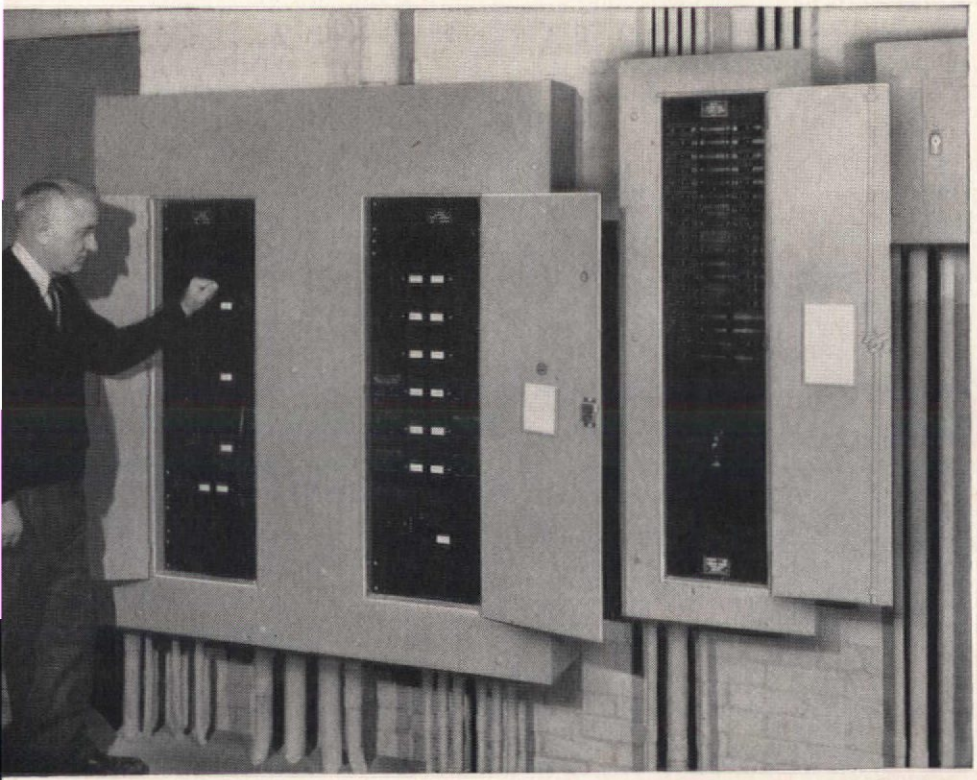
The final, functional link in this hospital's unique electrical distribution system is provided by Westinghouse De-ion® Circuit Breaker Panelboards. Built to one unvarying standard of quality and performance, each Westinghouse Panelboard was, nevertheless, individually engineered to match the requirements of specific, local electrical services.

Critical space was saved—because Westinghouse Panelboards are compact. Safety was gained because Westinghouse De-ion Circuit Breakers in these panels can be operated without danger . . . will not interrupt vital hospital services needlessly. Future additions or changes in load will be easily accomplished—because extra circuit capacity has already been provided.

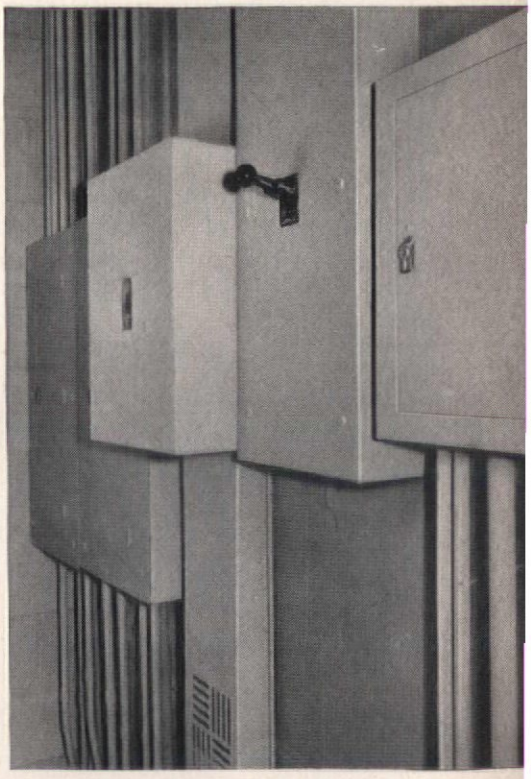
J-93520

YOU CAN BE **SURE**...IF IT'S

Westinghouse



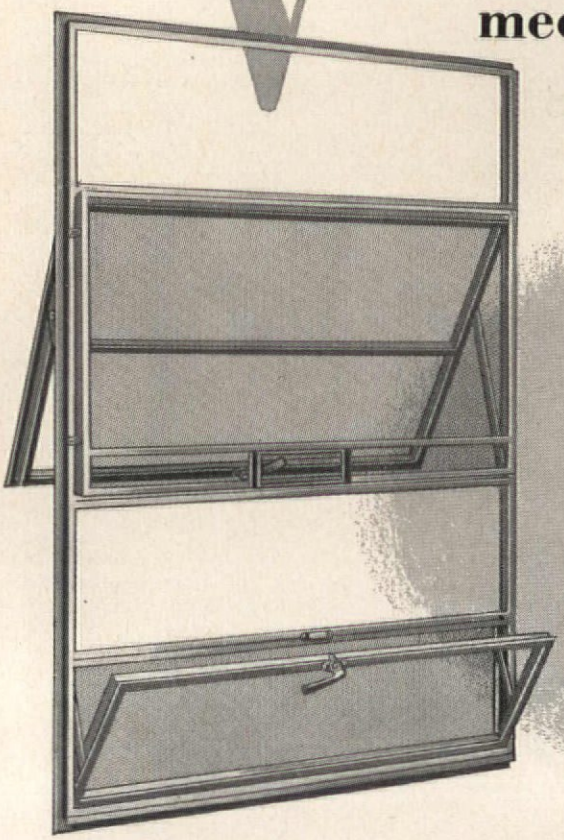
Tripped circuits can be seen at a glance—because all Westinghouse De-ion Circuit Breaker handles assume central position on automatic tripping.



Panelboards are mounted in wire closets on each floor. They provide for centralized control of electrical services.

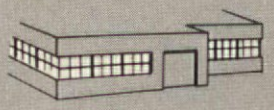
Visioneering*

meets the demands of modern building trends

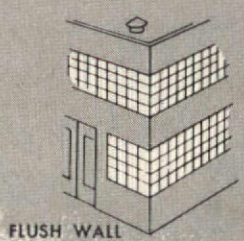


BAYLEY

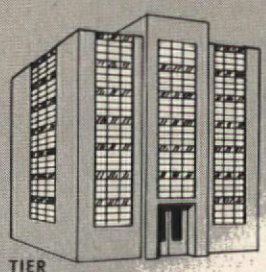
aluminum projected windows in panel wall arrangements



BAND ARRANGEMENT



FLUSH WALL ARRANGEMENT

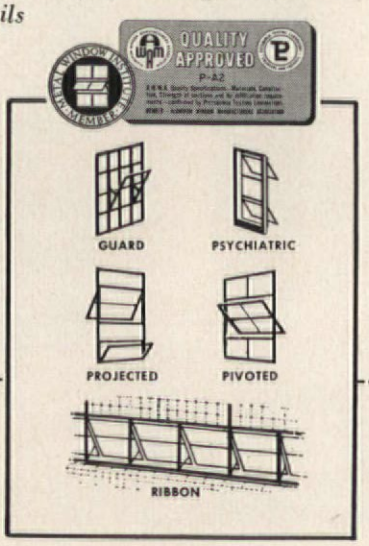


TIER ARRANGEMENT

As a result of Bayley Visioneering you can now execute many of your choice design treatments in modern panel-wall construction, without the costliness of special window designing. With Bayley subframe design, which accommodates separate window units, standard Bayley Aluminum Projected Windows (with channel frames) of any standard size can be used—offering wide flexibility in the use of newer panel decorating materials, plus the desired window area for providing maximum air, light and vision.

Window units are available in a variety of ventilator arrangements. And in addition to the many other advantages of the projected type window, the maintenance-free aluminum construction complements all types of building materials. If you're not fully acquainted with this newest Bayley development look up Bayley's Aluminum Window Catalog in Sweet's —or better yet, *write for a Bayley Catalog and full size drafting room details*

Visioneering—The science of coordinating vision, air and light in modern building walls with windows of advanced design.



Bayley Visioneering* Reflects 75 Years of Reliability

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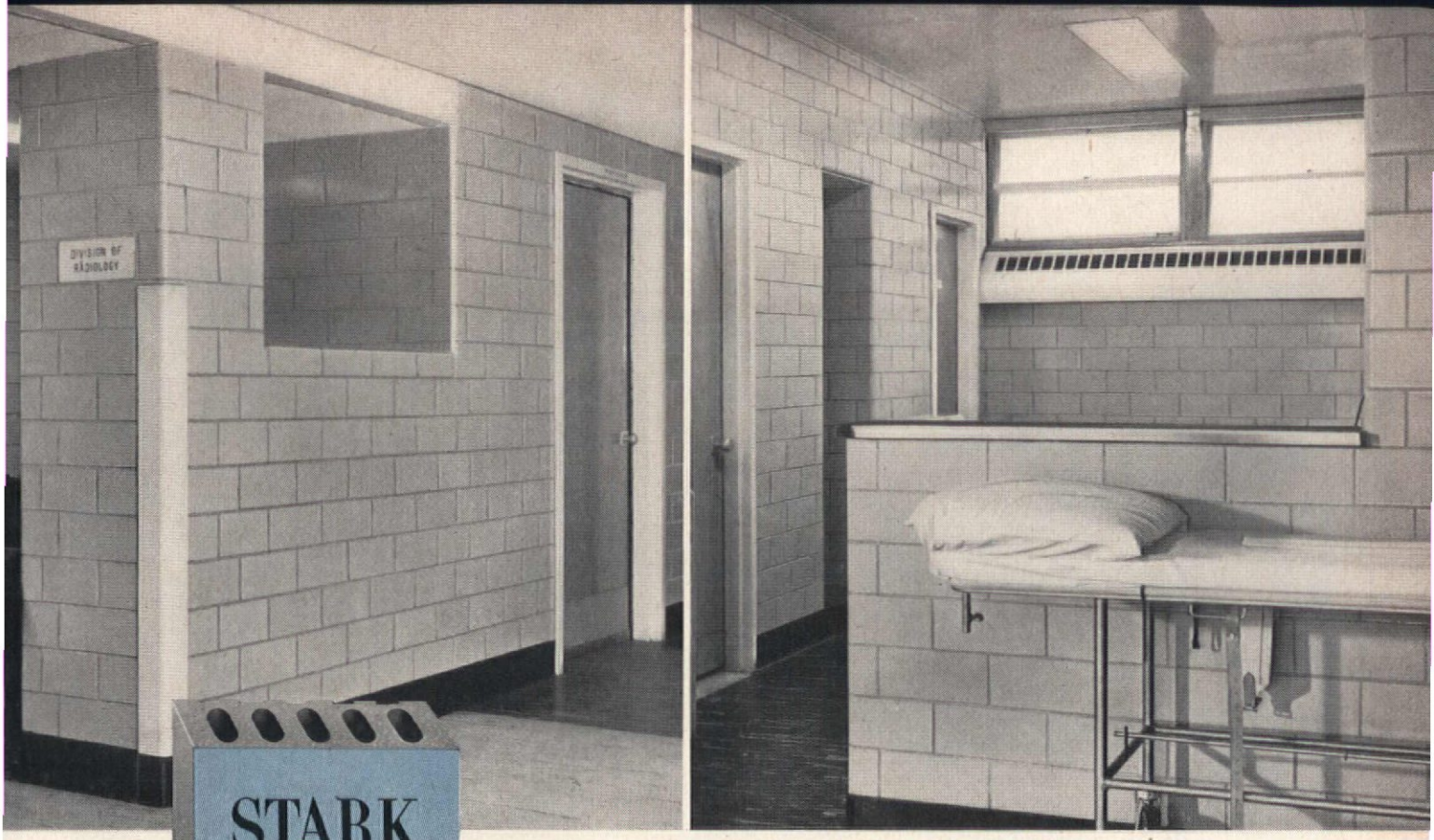

Radiology Department (left). Nurses' Station, Emergency Admitting Section (above). North Shore Hospital, Manhasset, Long Island, New York

Isadore Rosenfield, Architect
Gerace & Castagna, Contractor

STARK GLAZED FACING TILE

. . . sign of good hospital practice

The new 182-bed North Shore Hospital is designed for tomorrow as well as for today—with Stark Glazed Facing Tile in areas where cleanliness, durability and minimum maintenance are essential.

Like the rest of the building, these areas are planned to accommodate future expansion with as little dislocation as possible.

Architect Isadore Rosenfield used Stark Glazed Facing Tile to provide structural partitions and a permanent, suitable finish in a single building operation. The clear glaze surface is easily maintained, also blends with other elements of the color scheme to produce a cheerful, psychologically helpful environment for patients.

FREE BROCHURE on Modular Masonry will help you use Stark Glazed Facing Tile to best advantage. Address your request to Dept. AR-4.

STARK *Ceramics, Inc., Canton 1, Ohio*

QUALITY FACING TILE — FTI — Member of FACING TILE INSTITUTE

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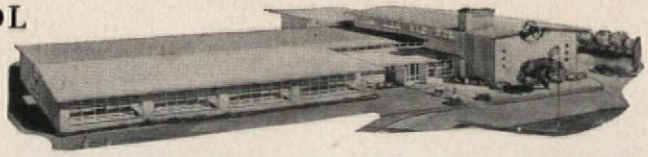
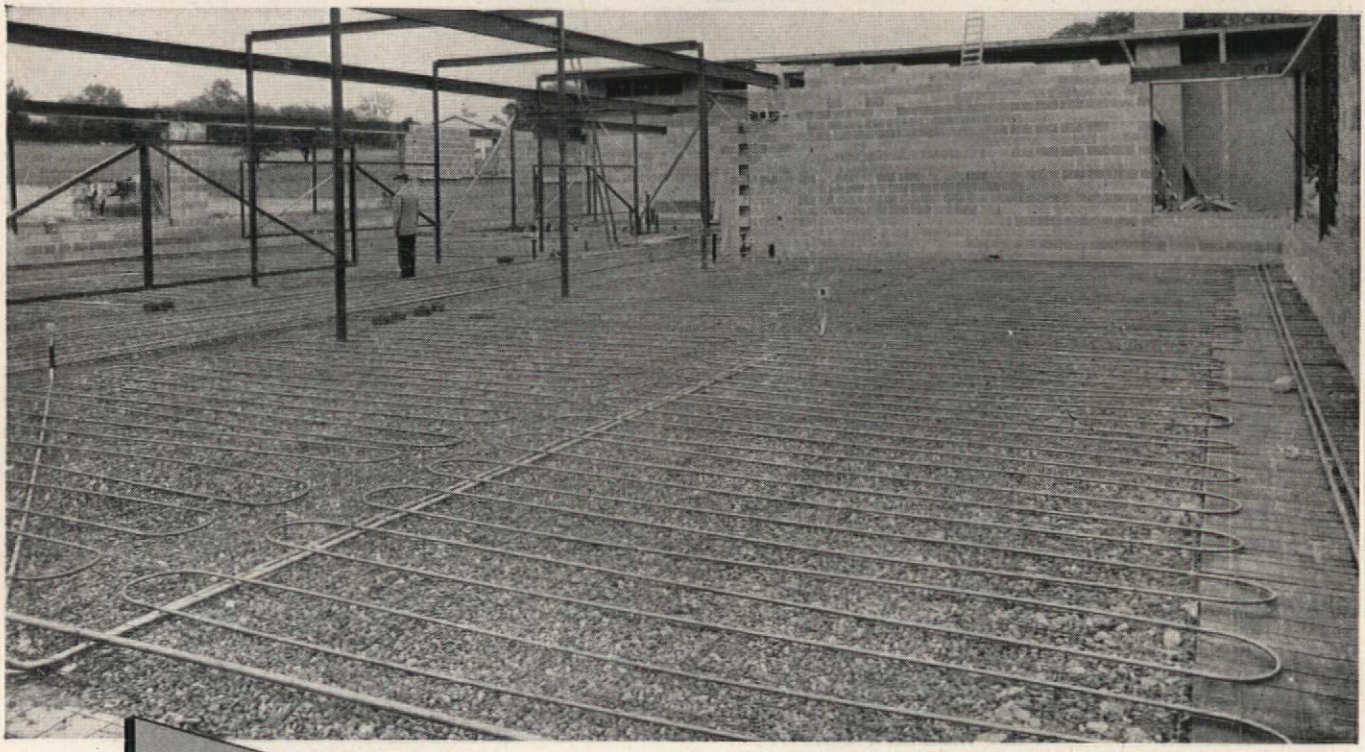
MANCHESTER ELEMENTARY SCHOOL

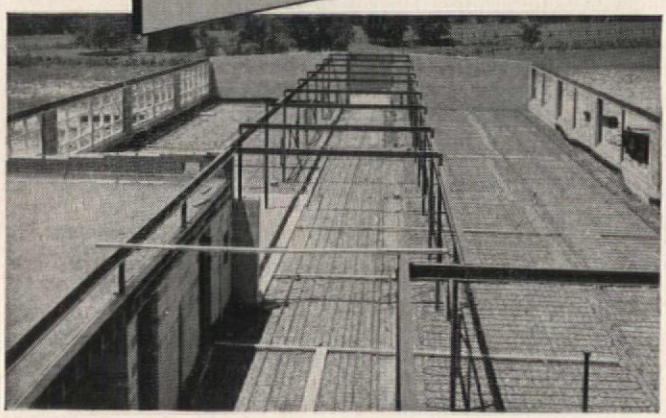
Manchester, Missouri

Architect: CHARLES W. LORENZ, Kirkwood, Mo.
Contractor: JUENGEL CONST. CO., St. Louis, Mo.
Radiant Heating: BAGLEY & COMPANY, Inc., Robertson, Mo.
Revere Distributor: GRINNELL COMPANY, Inc., St. Louis, Mo.





Another case of COPPER where it counts!



TWO VIEWS of the radiant Panel heating layout before concrete slab was poured. Floor area over 17,000 sq. ft. System was imbedded in slab 4". Gravel fill is 6" deep. Coils are 12" OC. System is divided into 4 zones, with all supply and return lines also of copper. Note edge insulation at right in large photo.

Radiant Panel Heating fits perfectly into the growing trend to 1-story school construction. It means warm floors, no drafts, and a healthier atmosphere for scholars. To the architect radiant panel heating means greater latitude in design, more usable space for the money. And for the user it means greater heating efficiency, lower redecorating costs and less cleaning and maintenance than when old-fashioned heating methods are used. The ideal material for panel heating is copper. For no other metal or alloy has all the desirable construction characteristics of this "ageless" metal.

Revere Copper Water Tube is easy to bend and handle . . . its long 60′ lengths require fewer fittings, the solder fittings used eliminate the need for welding, wrench work and thread cutting, while its lasting, non-rusting qualities have been proven through the centuries. Even being buried in a concrete slab doesn't bother enduring copper. Copper is the metal you can trust. That's why, in structures built to last, copper invariably gets the call.

Next time be sure to specify Revere Copper Water Tube for radiant panel heating, hot and cold water lines, underground service lines, air conditioning and processing lines, waste stack and vent lines. There is a Revere Distributor near you who carries a full supply of Revere Copper Water Tube in various sizes and tempers. And if you have technical problems, he will put you in touch with Revere's Technical Advisory Service.

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

230 Park Avenue, New York 17, New York

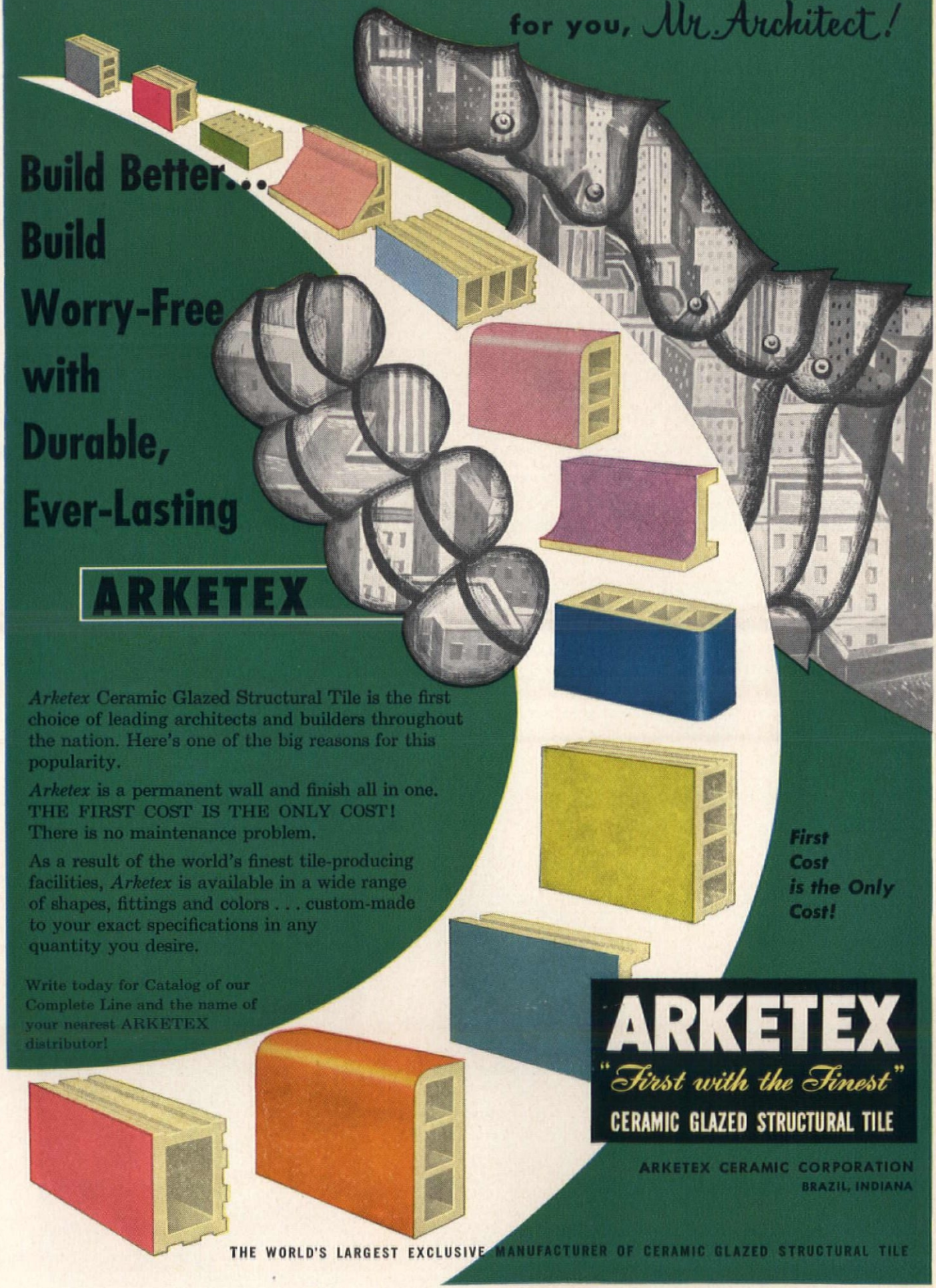
Mills: Baltimore, Md.; Chicago and Clinton, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y. —Sales Offices in Principal Cities, Distributors Everywhere.

SEE "MEET THE PRESS" ON NBC TELEVISION, SUNDAYS

for you, Mr. Architect!

Build Better... Build Worry-Free with Durable, Ever-Lasting

ARKETEX



Arketex Ceramic Glazed Structural Tile is the first choice of leading architects and builders throughout the nation. Here's one of the big reasons for this popularity.

Arketex is a permanent wall and finish all in one. THE FIRST COST IS THE ONLY COST! There is no maintenance problem.

As a result of the world's finest tile-producing facilities, *Arketex* is available in a wide range of shapes, fittings and colors . . . custom-made to your exact specifications in any quantity you desire.

Write today for Catalog of our Complete Line and the name of your nearest ARKETEX distributor!

First Cost is the Only Cost!

ARKETEX

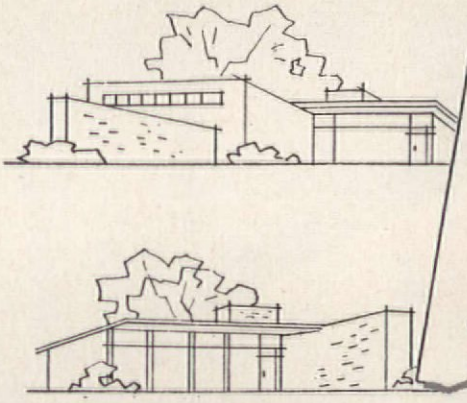
"First with the Finest"

CERAMIC GLAZED STRUCTURAL TILE

ARKETEX CERAMIC CORPORATION
BRAZIL, INDIANA

THE WORLD'S LARGEST EXCLUSIVE MANUFACTURER OF CERAMIC GLAZED STRUCTURAL TILE

want to sell more air conditioned homes?



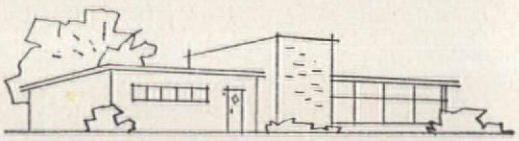
Please Note!

The water-cooled air conditioning system costs at least 20% less to operate than an equal capacity air-cooled system, because it operates at lower condensing pressures. For instance, a 1½-hp water-cooled system produces as much air conditioning as a 2-hp air-cooled unit.

HALSTEAD & MITCHELL

RESIDENTIAL COOLING TOWERS

SAVE 95% ON AIR CONDITIONING WATER BILLS



To sell more air conditioned homes, your potential customers must be convinced that operating their air conditioning is inexpensive. The Halstead & Mitchell Residential Cooling Tower saves cooling water by the thousands of gallons each month, slashing water bills by over 95%. Here is a major buying incentive for home air conditioning, proven by performance in thousands of industrial and residential installations.

PRICED FOR THE HOME AND SMALL BUILDING MARKET

Halstead & Mitchell Residential Cooling Towers are the first quality cooling towers specifically designed and *priced* for the small building market. Built in a complete range of sizes, from 2 through 7½ tons, they are available to meet every small building specification.

20-Year Guarantee! ON THE WETTED DECK SURFACE

All the quality built into Halstead & Mitchell Industrial Cooling Towers is incorporated in these Residential Cooling Towers . . . including the famous 20-Year Guarantee on the Wetted Deck Surface against attack by rotting due to fungi growth . . . *exclusive with Halstead & Mitchell.* Five individual cabinet coatings of Vinsynite, Vinyl Zinc and chlorinated rubber add important years of protection against rusting, as does stainless steel for fans and shafts. And advanced design provides the easiest maintenance possible!

At Leading Refrigeration & Heating Wholesalers Everywhere

more light toward the CEILING

means more seeing comfort BELOW!

• • • new Benjamin Diffuser-Reflector now delivers almost TWICE THE UPWARD LIGHT!

- **increases brightness control for greater uniformity of light**
- **eliminates annoying shadows that distract from work**
- **reduces contrasts that can cause eye fatigue**

This improved, all-porcelain-enamel Benjamin Diffuser Reflector enables you to utilize highest light levels and still enjoy comfortable seeing conditions, without materially reducing lighting efficiency.

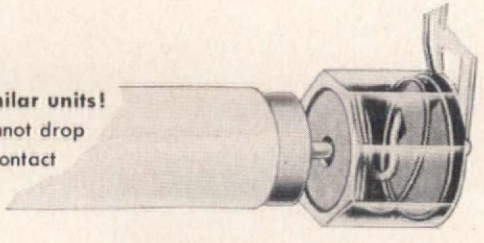
The answer lies in a series of 14 apertures, located on the top of the reflector, 7 above each lamp. Together, they direct 12.6%* of the light toward the ceiling. This greater upward light helps relieve disturbing contrasts between upper and lower room areas. It wraps the entire room in *uniform illumination*, so important in reducing eye strain and fatigue caused by excessive brightness contrast. For further details and lighting data, send for Data Bulletin. Benjamin Electric Mfg. Co., Dept. Q-1, Des Plaines, Illinois.

**for 2-lamp units. 10.7% for 3-lamp units. As compared with 6.7% and 5.8% respectively, delivered by previous Benjamin diffuser-reflectors.*

7B-260

. . . and of course, it has "SPRINGLOX," the exclusive, metal-clad lampholder!

distinguishes Benjamin Diffuser-Reflector from all similar units! cuts out-of-service time due to socket failure . . . lamps cannot drop out or be shaken loose . . . never fails to make electrical contact the *first* time . . . patented spring construction is the secret!

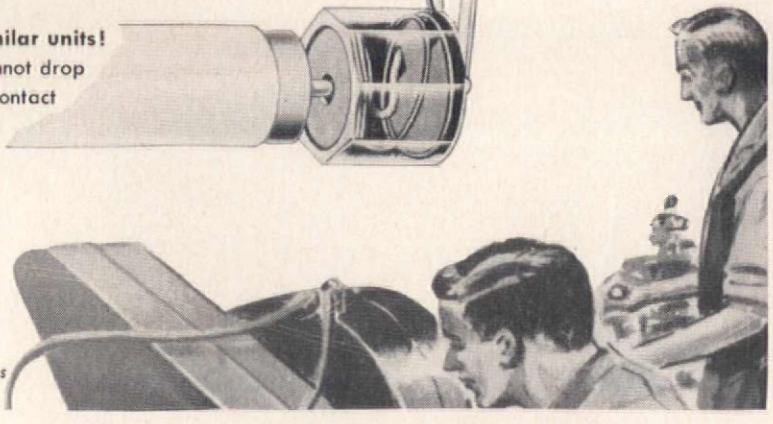


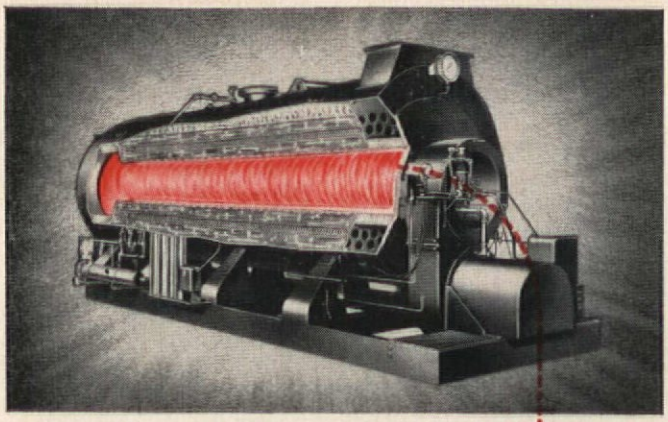
BENJAMIN TRADE MARK

Diffuser-Reflector

Sold exclusively through electrical distributors

available in open-end and closed-end units, for single or bi-pin lamps





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Cyclonic Combustion!

FOR INDUSTRY

- The Cyclotherm Cyclonic Combustion Principle is an entirely new and amazingly different method of heat transfer in the boiler industry.

FOR DAIRIES

- Air enters the combustion chamber at extremely high velocity in a revolving spiral vortex which travels the entire length of the furnace. The fuel is introduced into the entering air where it is slowly consumed as it moves in a cyclonic motion down the combustion chamber. This highly luminous slow burning flame radiating heat to the fire tube through direct radiation and by convection, results in an unusually high rate of heat transfer.

FOR DRY CLEANERS AND LAUNDRIES

- *No matter what size the building or job, Cyclotherm has the correct installation. Send for your copy of "All Your Questions Are Answered by Cyclotherm" today and find out for yourself the facts concerning Cyclotherm Steam Generators.*

FOR HOTELS AND OFFICE BUILDINGS

CYCLOTHERM
STEAM GENERATORS

CYCLOTHERM DIVISION U. S. RADIATOR CORP.
DEPT. 23
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Please send without obligation my copy of "All Your Questions Are Answered by Cyclotherm."

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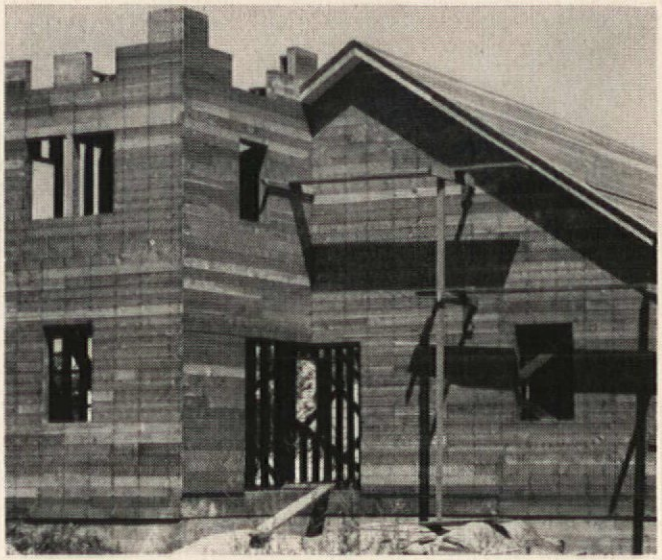
take a good look at LARCH



one of 10 woods from the WESTERN PINE region

Strong, durable and straight-grained, Larch is a favorite for framing, sheathing, subflooring, flooring and siding. Tough-fibered and rigid, it works well, holds its shape and resists nail withdrawal. Its handsome grain, satin-smooth surface and reddish color suit it well for interior paneling and cabinetwork.

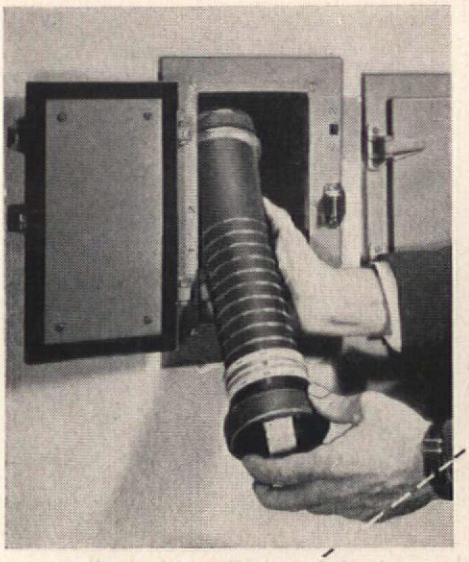
Larch comes in **3 select, 5 common, 3 structural, 4 dimension grades.** Your local lumber yard carries Larch from the Western Pine region—or can get it for you quickly!

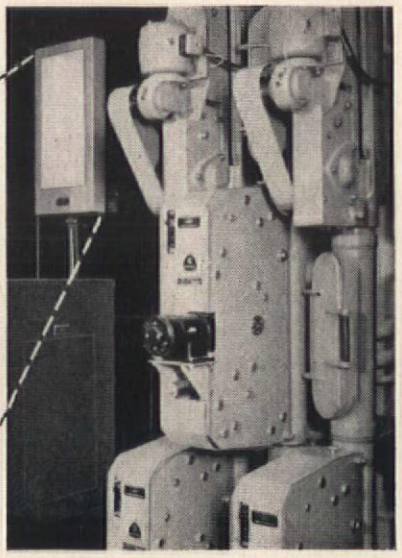
the Western Pines
- IDAHO WHITE PINE
- PONDEROSA PINE
- SUGAR PINE

the Associated Woods
- LARCH
- DOUGLAS FIR
- WHITE FIR
- ENGELMANN SPRUCE
- INCENSE CEDAR
- RED CEDAR
- LODGEPOLE PINE

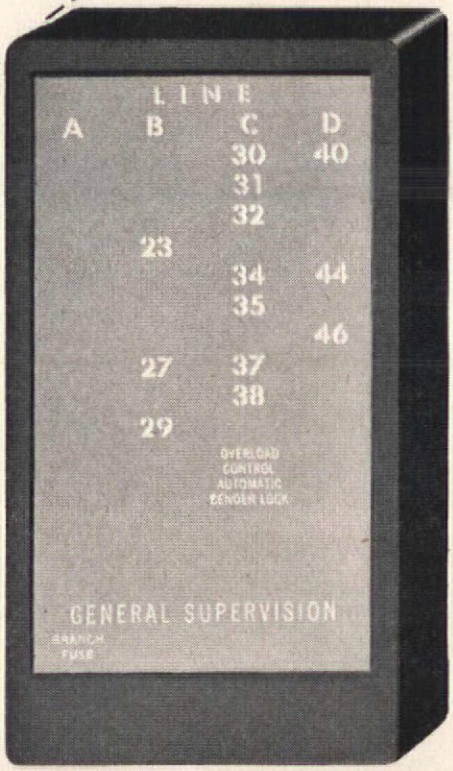
®

get the facts on LARCH
write for the FREE illustrated booklet to
WESTERN PINE ASSOCIATION, Dept. 304-U
Yeon Bldg., Portland 4, Oregon

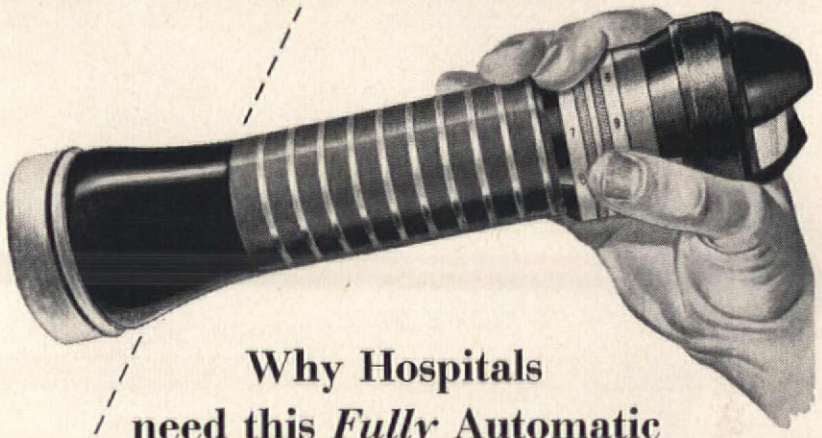




Typical installation of the Automatic Selective Pneumatic Tube System. *Left:* Tube carrier being placed in a transmitting tube. *Center:* The medical records room where employees are on hand around the clock. Mis-directed carriers come to this point for return to the sender. *Right:* Central control station. Signal panel is at left center. Systems of this type are in operation at Johns Hopkins Hospital, Baltimore, Md., and Genesee Hospital, Rochester, N. Y.



Signal control panel, monitoring 4 lines shows that Line "A" is inoperative due to blown "Branch Fuse." Lines "B" and "D" signal that carriers are on the way to stations 23, 27, 29, 40, 44 and 46. In Line C the "Overload Control Automatic Sender Lock" has closed the line to additional carriers until a momentary congestion lessens. Meanwhile carriers proceed to stations 30, 31, 32, 34, 35, 37 and 38.



Why Hospitals need this *Fully* Automatic Selective Pneumatic Tube System

The ingenious visual signal and control panel in the system developed by International Telephone and Telegraph Corporation provides automatic control and monitoring unmatched by any other pneumatic tube system. This panel, generally located where personnel are always on duty, indicates carrier progress throughout the system. It *takes instant action* should failure occur—loss of pressure, foreign matter in the tube, a blown fuse. The affected area is locked off—*permitting the rest of the system to operate*—and a signal, pin-pointing the trouble, flashes on. Thus, the installation is "fail-safe."

Operation is simple. You dial the destination on the carrier's adjustable rings, and insert in the transmitting tube. Within seconds, electro-mechanical switching whisks the carrier to the correct station.

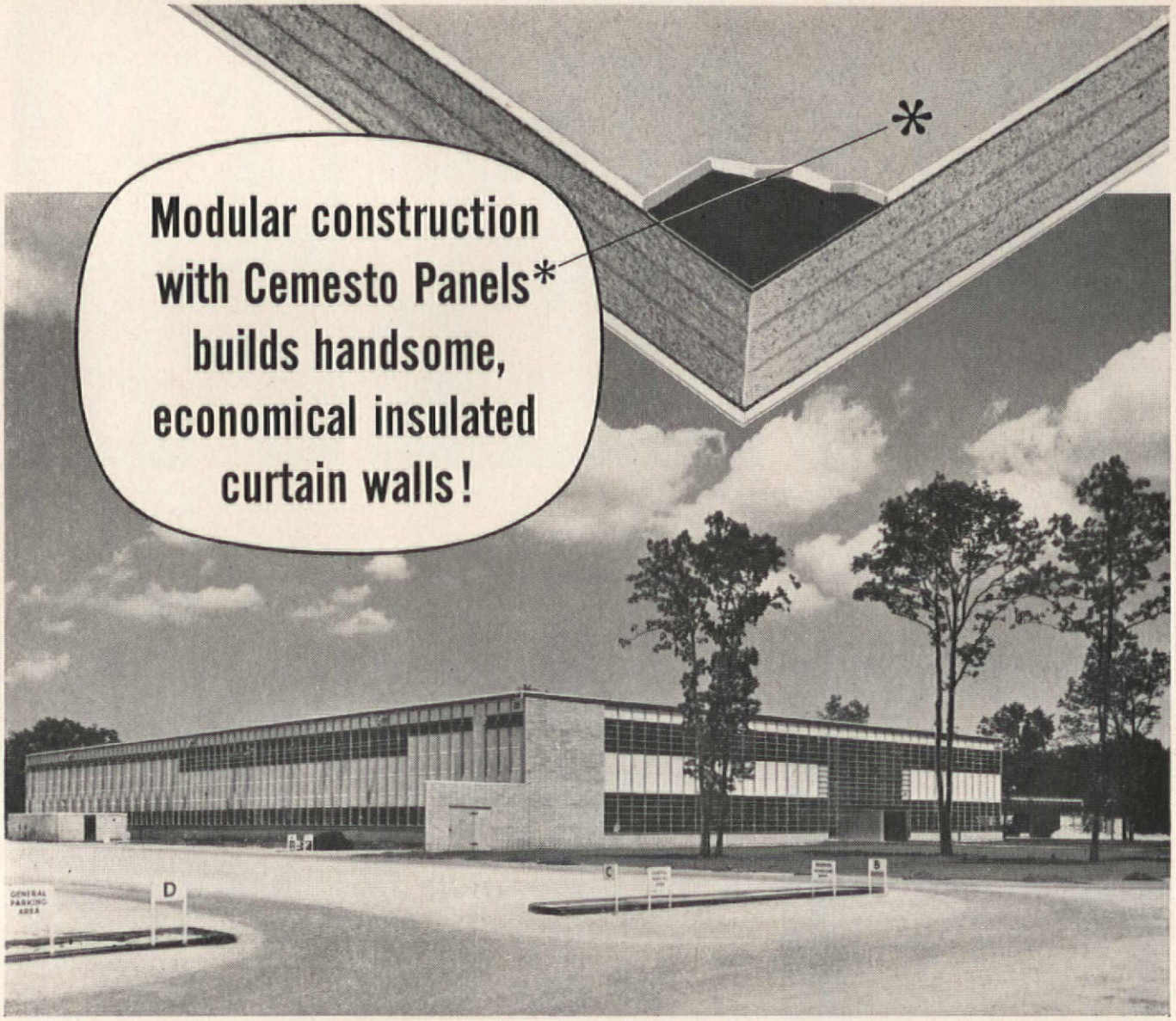
This automatic selective system provides the modern hospital with swift, 24-hour distribution for paperwork, medications, laboratory samples, any suitable item. It saves time of personnel . . . frees nurses for nursing duties . . . saves space. A comparative analysis of this system with the manual type in a 15-station installation shows: 6 pneumatic lines in place of 23; 10 hp instead of 20 hp power supply; 3,000 carrier capacity per 8-hour period, against the variable of operator efficiency; expansion by "tapping" existing lines, as opposed to *adding* new lines—and all under automatic control.

For information on the Automatic Selective Pneumatic Tube System address Dept. A

AN IT&T ASSOCIATE

International Standard Trading Corporation

22 Thames Street, New York 6, N. Y.



Stratos Division Plant of Fairchild Engine & Airplane Corp. at Bay Shore, L. I., N. Y., shows its handsome Cemesto Panelized exterior. Here is a unique combination of striking modular design plus functional use of panel materials.

In blending harmoniously with brick, stone, wood, glass . . . or for use as the sole curtain wall material . . . Cemesto Insulating Structural Panels combine top efficiency and performance with top economy. They simplify design, speed construction, reduce maintenance costs of all types of buildings. And result in strong, fire-resistant, insulated curtain walls with outstanding savings in time, labor, materials.

Numerous Benefits

Each Cemesto Panel is a marvel of structural strength, a complete self-contained curtain wall unit with high insulation value and pleasing finish. The hard, smooth, stone-gray surfaces afford excellent light reflection. Panels can be worked with ordinary tools on the job, or pre-cut at the mill for faster application. Quickly attached to steel framing with metal accessories, or to wood framing or members with nails or screws.

Accent on Trimness

Used with attractive new extruded aluminum batten accessories, Cemesto Panels build extremely trim and good-looking curtain walls. These battens have built-in Neoprene gaskets for perfect air and weather tightness. Fastening bolts are applied from interior side of curtain wall; exterior face of anodized batten presents an unbroken satin-finished surface which harmonizes with gray Cemesto Panels and permits complete freedom of design.

To the architect faced with a time, cost, or labor problem, Cemesto Panels bring a remarkable working "tool". . . an all-purpose material that can be used for curtain walls, roof decks, partitions. Write today for full data on the way to faster, lower-cost construction with Cemesto Insulating Structural Panels. The Celotex Corp., Dept. AR-34, 120 S. LaSalle St., Chicago 3, Ill.

***Cemesto Panels are** strong, rigid, permanent insulating structural "sandwiches"! Their core is Celotex cane fiber insulation, protected from dry rot and termites by the patented Ferox® Process. Non-combustible cement-asbestos facings are bonded to both sides of this insulating core by a moisture-proof adhesive. Cemesto Panels resist fire, weather and wear, need no painting or maintenance. Readily demountable, fully salvageable!

Another Famous CELOTEX Product

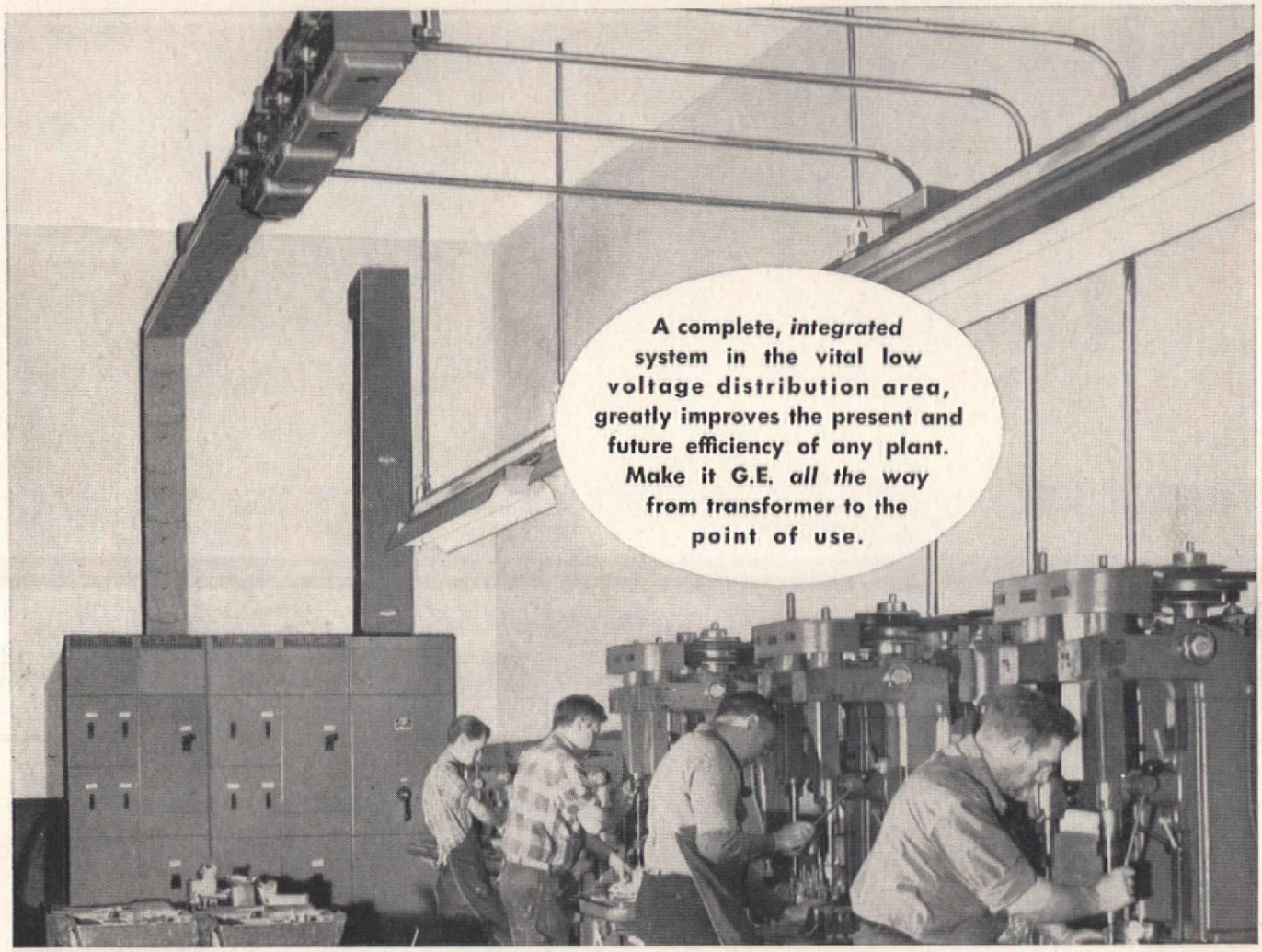
CEMESTO

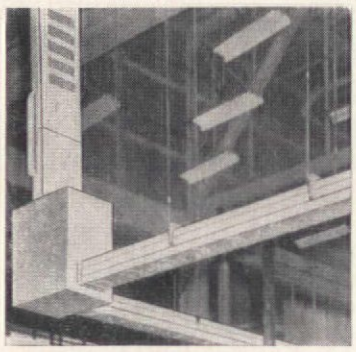
REG U S PAT OFF

INSULATING STRUCTURAL PANELS

The Celotex Corporation, 120 S. LaSalle Street, Chicago 3, Illinois

To have a flexible plant you must have flexibility here





Type LVD Flex-A-Power feeder busway connecting with type FVK Flex-A-Power take-off which provides power outlets at one foot intervals. Both available with either copper or aluminum bus bars.

TO PROVIDE for progress you must be free to shift machinery, equipment, perhaps whole departments freely. In many otherwise modern plants this is impossible because of inadequate power supply where it is needed.

General Electric Flex-A-Power busway systems provide complete flexibility of power and lighting arrangements, as well as mobility for portable power tools—in existing buildings or new structures.

General Electric Motor Control Centers, designed for you, offer completely versatile, accessible, easily serviced centralized control of a-c motors up to 200 hp.

General Electric Panelboards complete the distribution and protection system. Assure uniformly high standards by specifying General Electric throughout the all-important load center-to-load area. For more information write General Electric Company, Distribution Assemblies Department, 41 Woodford Ave., Plainville, Conn.

GENERAL ELECTRIC

STOP THAT WASTE!

THERE IS A Josam INTERCEPTOR TO DO IT!

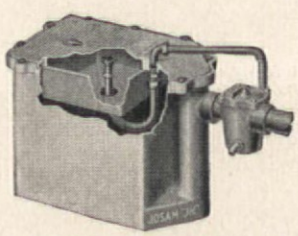
*

The problem of adequate waste disposal is becoming more serious every day. A terrific explosion in the sewers of the city of Cleveland, the clogging of a stream by poisoned fish in The Kalamazoo River Valley, and other similar incidents throughout the United States are proof of the need for positive waste control.

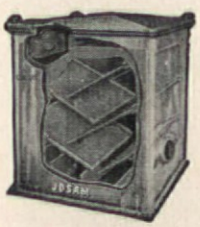
The responsibility for providing the proper safeguards is in your hands. No new building should be erected without adequate methods to intercept all types of industrial wastes. No existing building should be permitted to endanger health or safety through uncontrolled dumping of hazardous waste materials.

While the problem is serious, the answer in many cases is simple. Josam manufactures a complete range of interceptors that will remove almost any hazardous waste matter from the drainage before it reaches the sewer. Each of these interceptors is a device that has been tested and approved through thousands of installations...devices that have paid for themselves many times over...devices that you can depend on.

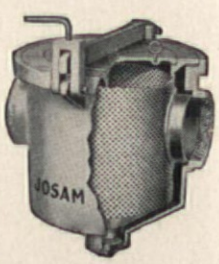
Get complete information on this important subject by returning the coupon printed below today.


Series JH Grease Interceptor

Series GA Oil Interceptor


Series H-40
Sediment Interceptor

Series H-20
Hair Interceptor



Series H-70
Sediment Interceptor

JOSAM MANUFACTURING COMPANY
DEPT. A. R. • MICHIGAN CITY, INDIANA
Please send information on interception of hazardous wastes.

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FIRM .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....

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GENERAL OFFICES AND MANUFACTURING DIVISION
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for 87 years, supreme quality

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See Sweets Architectural File, $\frac{6C}{Di}$ for complete Dicks-Pontius product descriptions and specifications—or write direct for your personal copy of our catalog.

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Sterling® HARDWARE

cuts down on costs and callbacks

SAVES TIME . . . MONEY
THROUGH SIMPLE INSTALLATION
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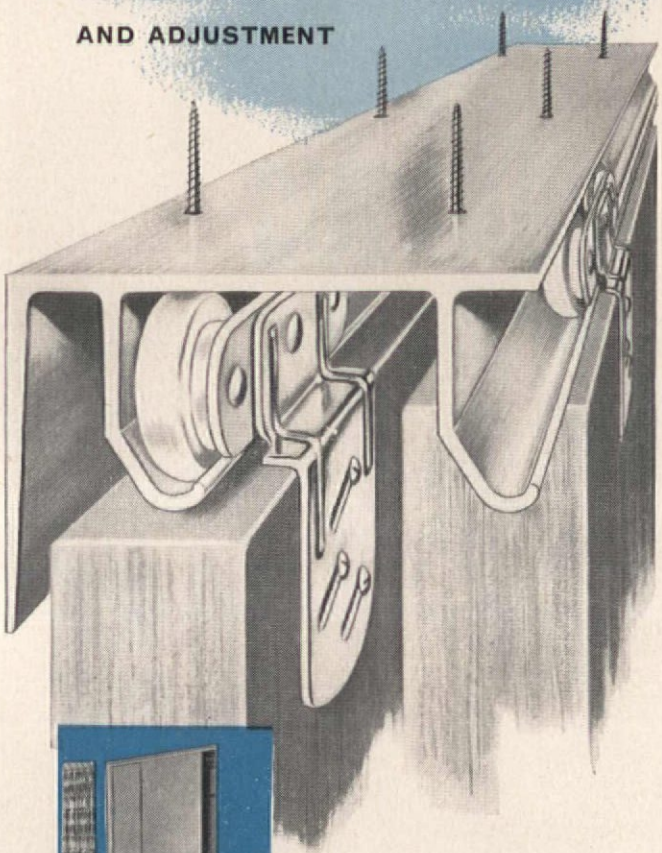

No expensive callbacks for adjustments when you use Sterling Sliding Door Hardware. Sterling design-perfection makes every installation easier. Sterling keeps more profit in the sale . . . less cost in the upkeep. Complete packaged sets of Sterling Hardware are available for most door openings.

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TRADE FRICK MARKS Refrigeration

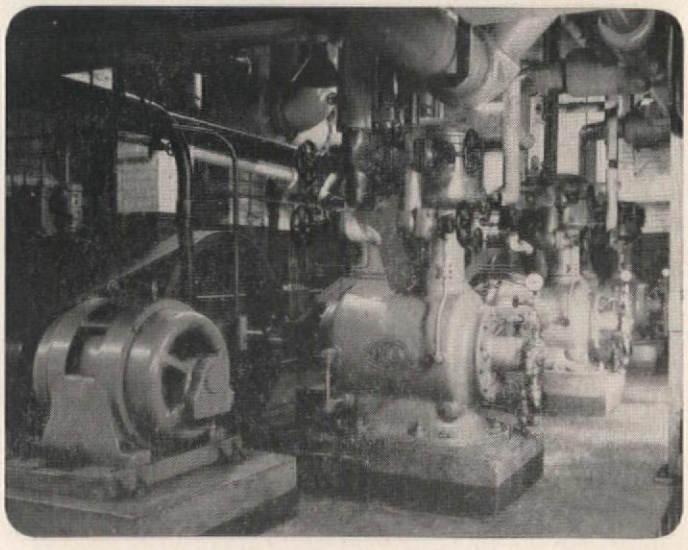
Provides Five Services For Hotel William Penn

These include air conditioning, cooling drinking water, refrigeration of foods, freezer service, and making ice. This magnificent Pittsburgh hotel has used Frick equipment since 1936, and finds it both efficient and dependable. Three of the four Frick compressors are shown below.

YOUR clients, too, can likely increase their profits with a Frick cooling system engineered to meet their exact needs. Let us submit estimates. Frick Branch Offices and Distributors in principal cities.

See our pages in Sweet's Architectural & Industrial Construction Files

DEPENDABLE REFRIGERATION SINCE 1882
FRICK CO.
WAYNESBORO, PENNA. U.S.A.



AZROCK

...Smooth as a Flagship Flight!

American Airlines International Waiting Room, San Antonio Municipal Airport, San Antonio, Texas.

The smooth, closely-textured surface of Azrock is no accident — it's deliberately built into this rugged asphalt tile — to make it easier to clean and keep clean. Azrock's dense inter-laced structure means years of extra wear, too.

And whether it's a modern airline terminal . . . a hospital, restaurant, school or home . . . Azrock sets the color theme with lighter, brighter colors you wouldn't expect to find in this low-cost flooring. Azrock colors are smart and modern . . . clean and bright . . . compatible with modern décor.

Azrock is made to order for the quickened tempo of today's living. It's easy to look at . . . easy to walk on . . . and easy to keep looking *right.*

With all its extra qualities, Azrock costs no more than ordinary asphalt tile — a longer wearing, better looking flooring with exceptionally low cost.

When there is no added cost, why not specify the best — quality Azrock Asphalt Tile. Samples and detailed product data sent on request without obligation.

AZROCK

ASPHALT TILE

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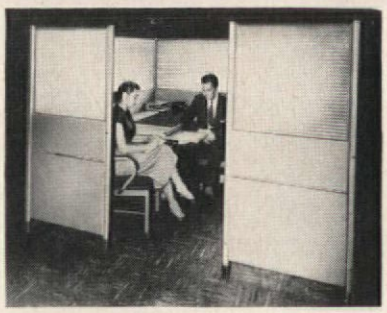
Free-Standing

Arnot PARTITION-ettes*

designed for Change and Changing!

Remember . . . A Screw Driver Is All You Need!

ADMINISTRATIVE BUILDING FOR
BAYWAY REFINERY, ESSO STANDARD OIL COMPANY
Lathrop Douglass, Architect; John W. Harris Associates, General Contractors



Since accelerated change is our way of life, architects know from experience that the office floor plan is NOT there to stay in its present state. Changing conditions, changing personnel mean the floor plan will have to change as surely as the pony express gave way to the telegraph, or the quill pen gave way to the typewriter

Because office space division is not static, the new administrative building for the Bayway Refinery of Esso Standard Oil Company uses Arnot Partition-ettes and Office-ettes† throughout. This is the first structure ever to be specifically planned to accommodate modular, functional office furniture . . . and the world's largest installation of it is now being completed in this fully air-conditioned, elevator building, containing 100,000 square feet of space.

For you, too, Arnot Partition-ettes in STEEL or WOOD are the best answer to the office space division problem. They can work in a variety of combinations, can be extended in any direction, can be moved with ease. A screw driver is the only tool needed for installation and they do not bolt to floors, walls or ceilings.

Write for full information

Arnot

The ARNOT PARTITION-ette is a product of

ARNOT JAMESTOWN CORPORATION
Jamestown New York

Subsidiary of AETNA STEEL PRODUCTS CORPORATION

PRODUCERS OF: The new Arnot Partition-ettes; Arnot functional office furniture; Hospital and Laboratory Equipment; Aetna Steel Doors and Frames; Kahr Bearings, Boyle Metal Office Partitions (Aetnawall)

*T M Reg. Pat. Pending
† Licensed under DuPont Patent

The most convincing stamp of user satisfaction

ANOTHER REPEAT ORDER FOR SARCO

Tuberculosis Hospital, latest addition to Kings County Hospital Center, Brooklyn, New York.

Architect: James Gamble Rogers Successors: Rogers & Butler
Mechanical Engineers: Clark, MacMullen & Riley
Heating Contractors: Fred Brutschy Company, Inc., N.Y.C.
Specification Approval: N.Y.C. Dept. of Public Works

First in 1930 *and seven times since*

Kings County Hospital Center relies on Sarco Heating Specialties

Whenever you find equipment specified and accepted eight times running, you can be sure there's a sound reason for it.

At Kings County Hospital Center, that reason is *Sarco dependability*.

Since 1930, Sarco heating specialties were installed on eight separate jobs. The latest installation was made in the new Tuberculosis Hospital.

Now, over 6000 Sarco products contribute to the dependability and efficiency of Kings County Hospital Center's vitally important heating system and hot water supply. Sarco heating specialties are installed throughout, including the nurses' home, laundry and kitchen. Sarco self-operated temperature regulators are used on hot water storage.

There's no more convincing evidence of Sarco dependability than this impressive record of repeat orders. Specify Sarco on your next job and be assured of similar user satisfaction.

We'd be happy to send you full information on Sarco's complete line of heating specialties.

SARCO

Sarco quality assures satisfaction

Here's why so many architects, engineers and heating contractors specify and install Sarco *— job after job.*

- **Proven dependability**
- **Trouble-free service**
- **Complete line from one reliable manufacturer**
- **Nationally known and preferred**

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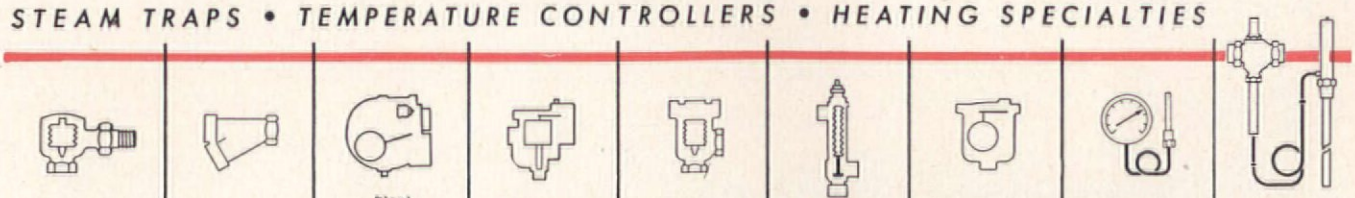
Sarco Canada, Ltd., Toronto 8, Ontario . . . Represented in Principal Cities

STEAM TRAPS • TEMPERATURE CONTROLLERS • HEATING SPECIALTIES



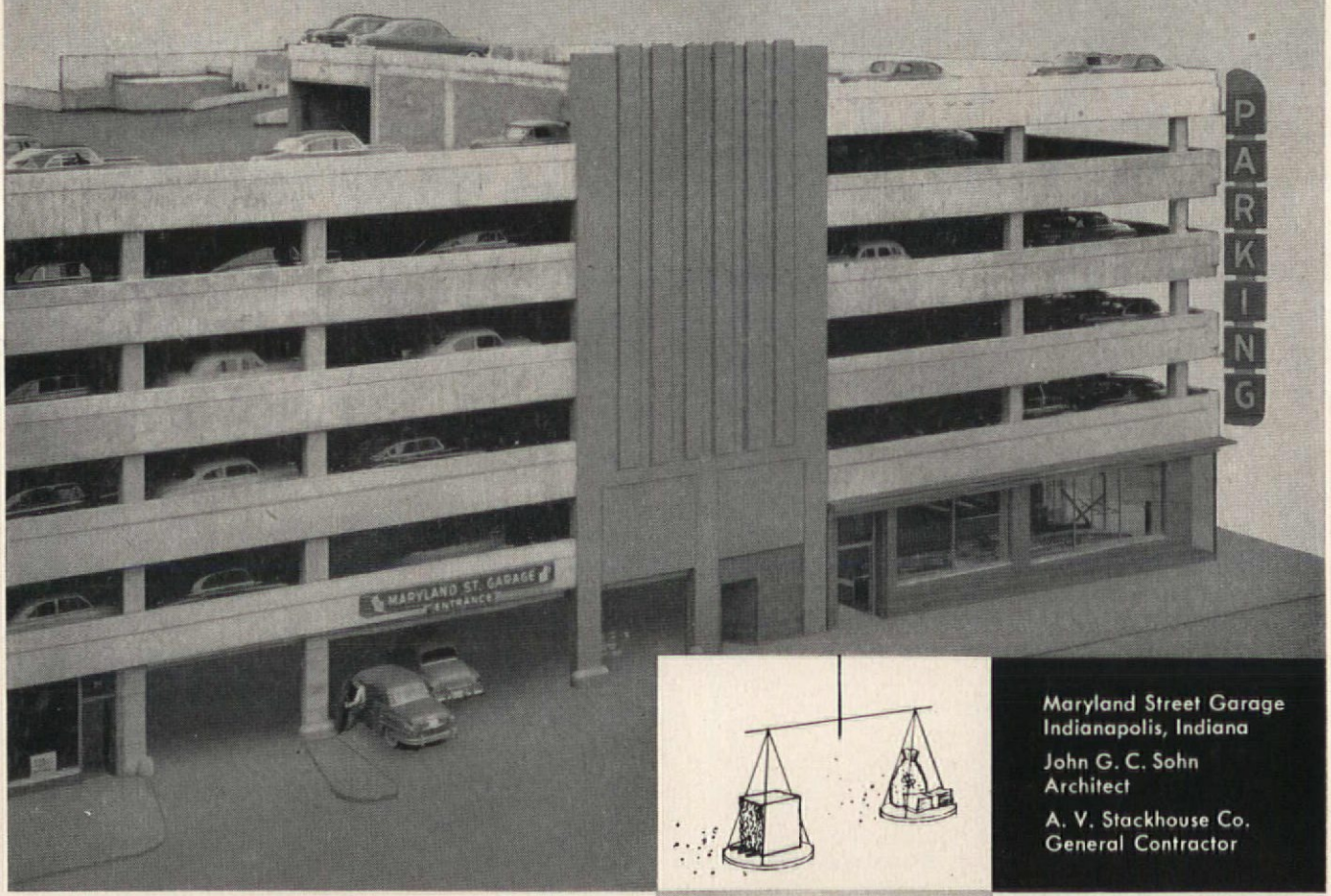
Radiator Valves • Traps | Strainers | Float-Thermostatic Traps | Camlift Bucket Steam Traps | Thermostatic Traps | Water Blenders | Air Eliminators | Dial Thermometers | Self-Operated Temp. Reg.

For this modern parking garage, reinforced concrete was chosen because of its basic economy. Reinforced concrete provided a strong, rigid, vibration-resisting structure . . . *at a low cost*. Since no painting is needed in this open, reinforced concrete structure, future maintenance will be low.

More and more architects and engineers are turning to reinforced concrete structures because reinforced concrete is less costly. Reinforced concrete goes up faster, too, and is inherently firesafe. It offers rugged strength that is highly resistant to wind, shock, and quakes. Furthermore, it permits great flexibility of design, and materials are readily available from local sources. On your next job . . . design for reinforced concrete.

The architect says...

"ONLY REINFORCED CONCRETE could be used economically"



Maryland Street Garage
Indianapolis, Indiana

John G. C. Sohn
Architect

A. V. Stackhouse Co.
General Contractor

Compare...

YOU'LL SAVE WITH REINFORCED CONCRETE

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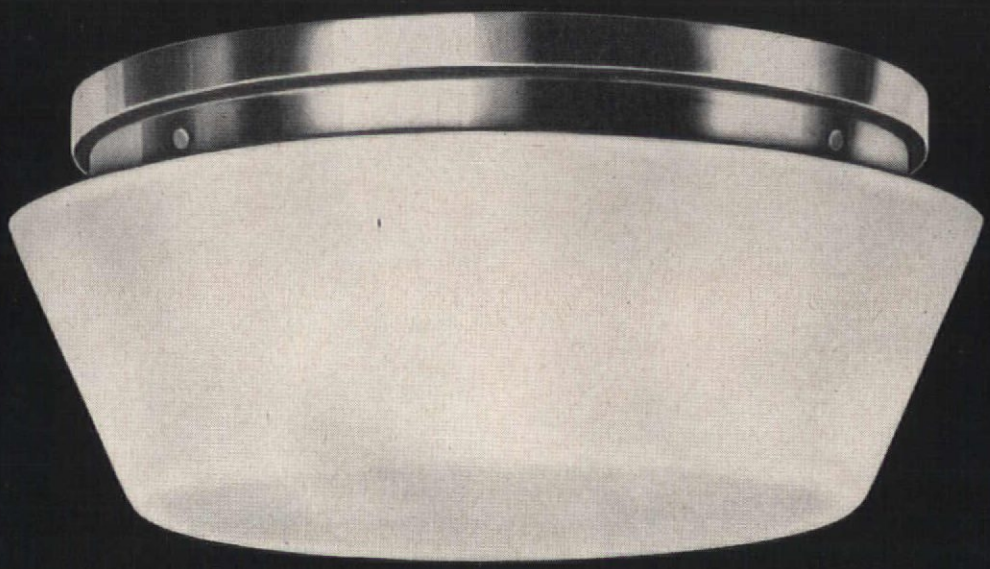
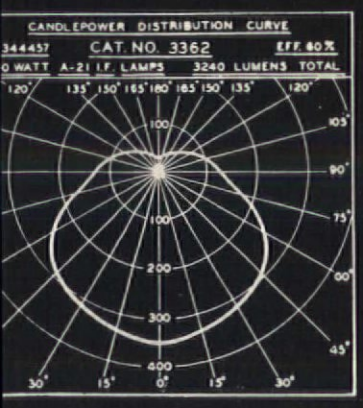
CONCRETE REINFORCING STEEL INSTITUTE





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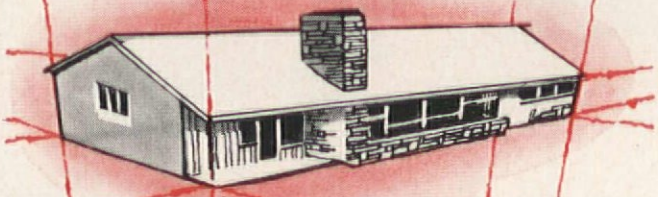

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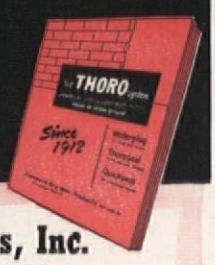

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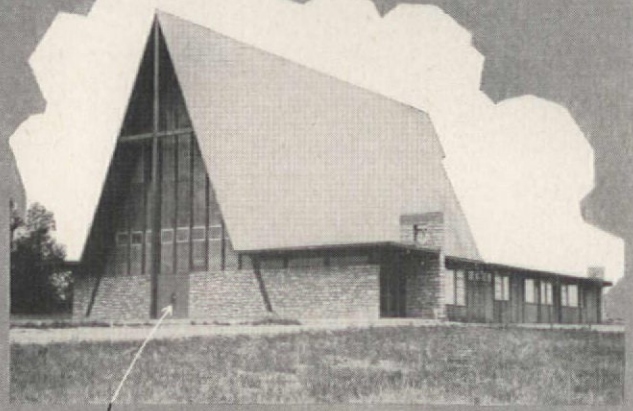

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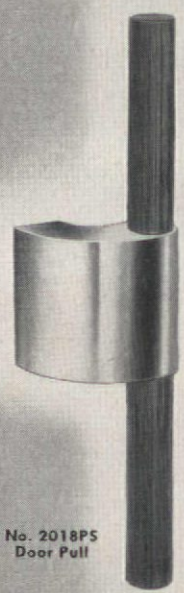

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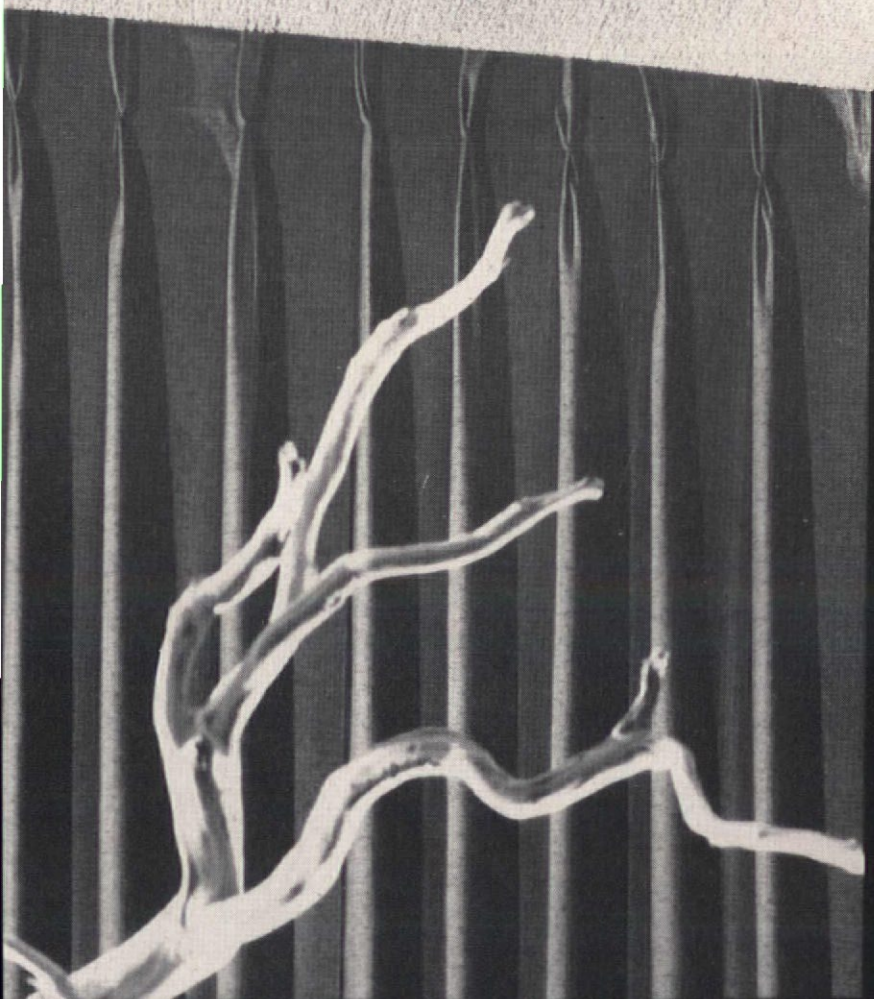

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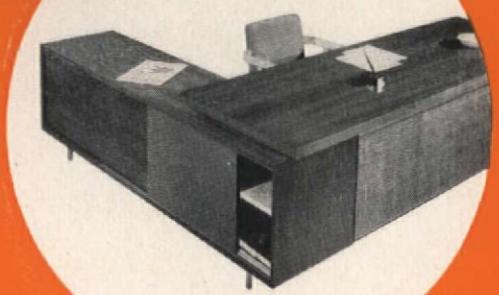

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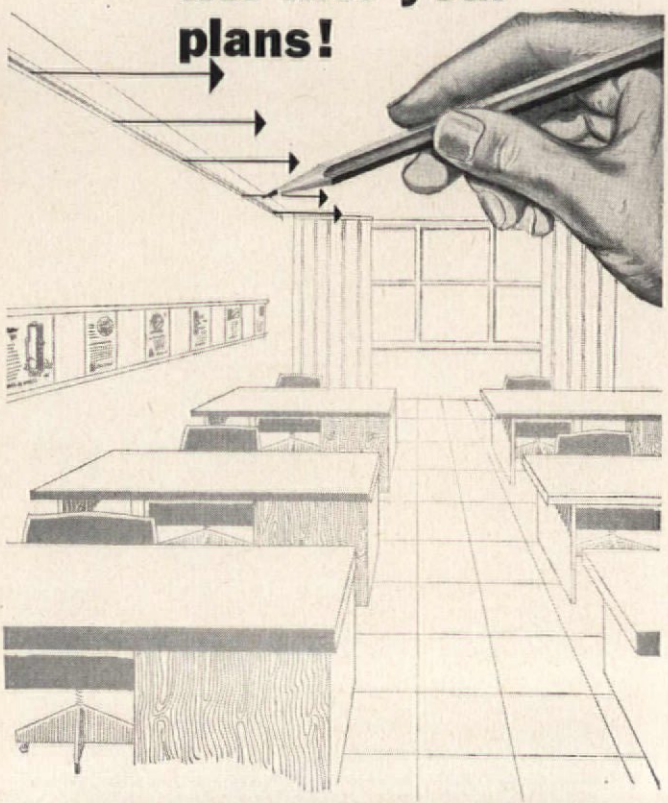

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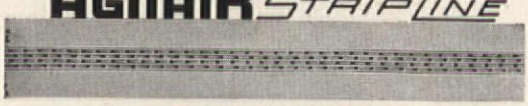

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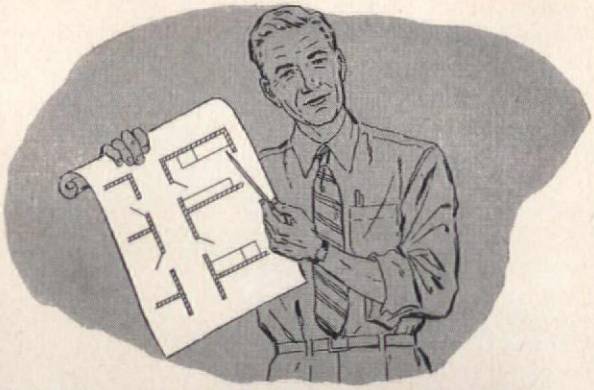

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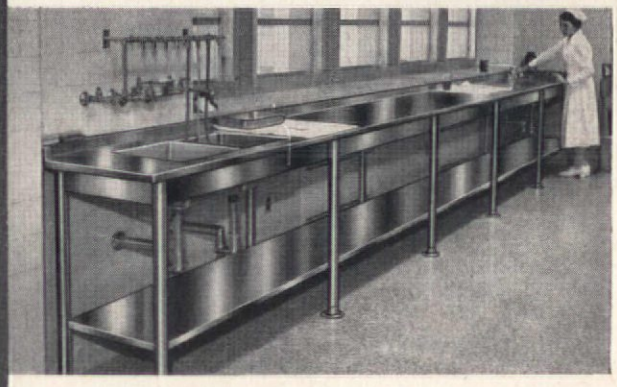

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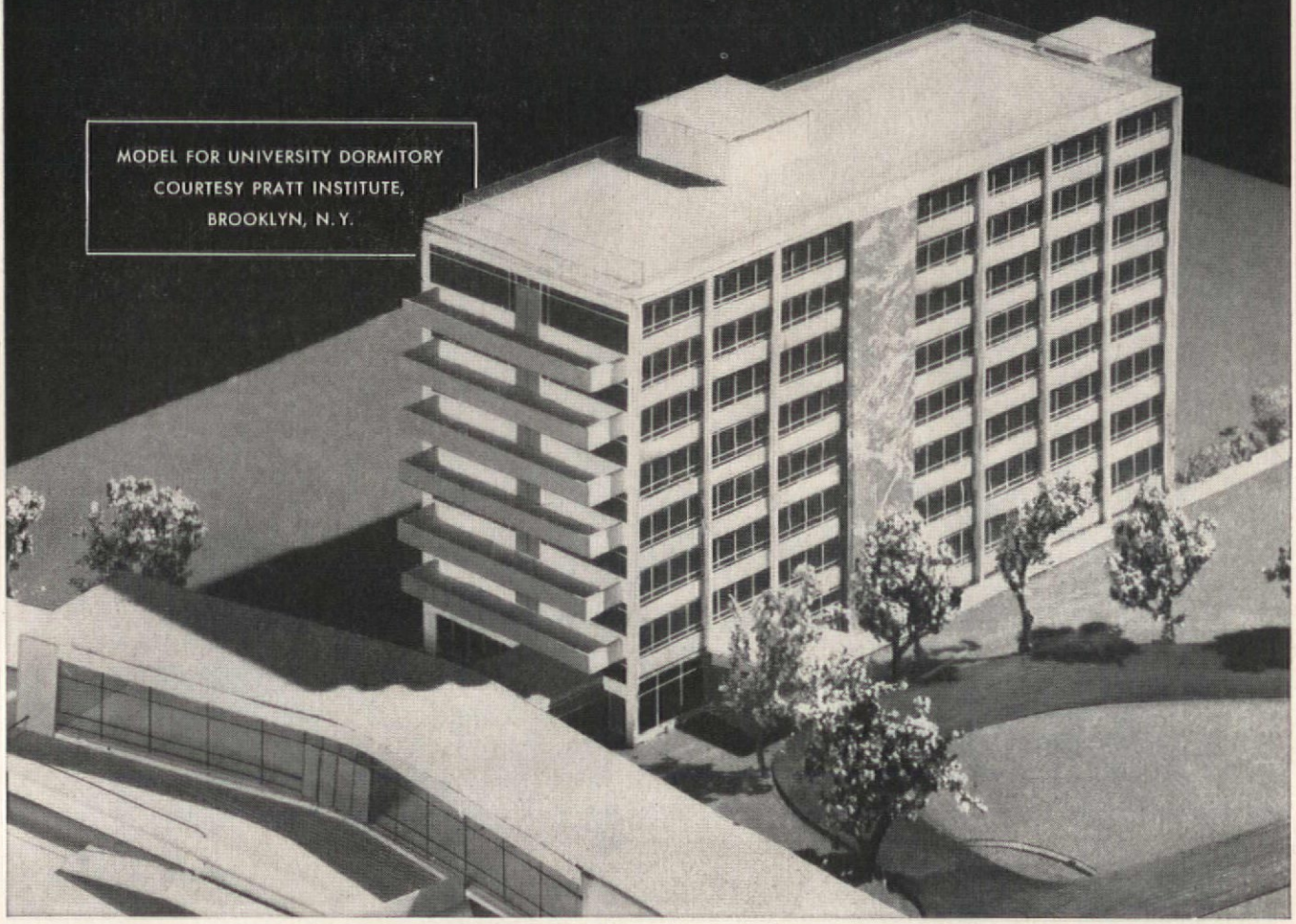

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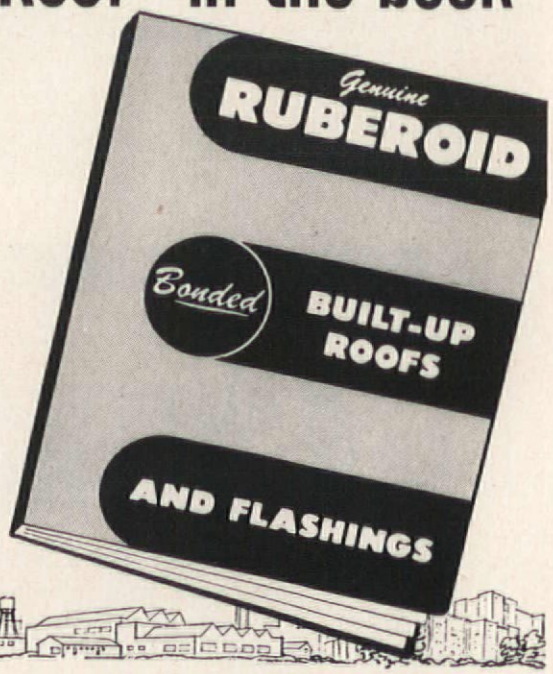

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A CONTEMPORARY EXPRESSION OF CATHEDRAL TRADITIONS

A RARE ASSIGNMENT TODAY, *the design of a cathedral poses some problems for contemporary architecture. This design for the new Coventry Cathedral, to replace the one bombed out, represents a thoughtful effort to develop, in modern materials and methods, the traditional thinking on church concepts and inspirational necessities. It was chosen from 219 schemes in competition. On the following pages the architect relates his reasoning.* — Ed.

A CONTEMPORARY EXPRESSION OF CATHEDRAL TRADITIONS

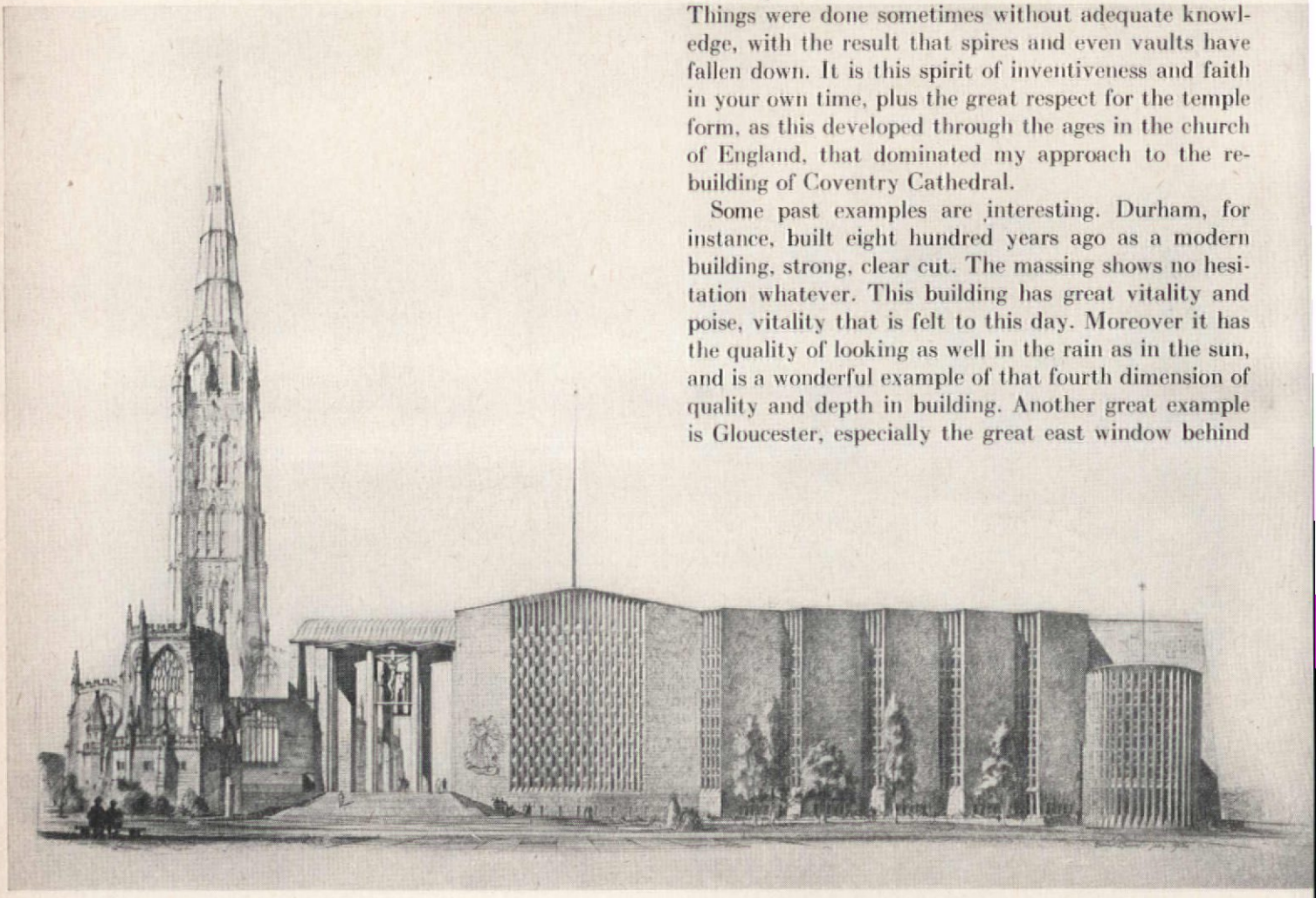
By Basil Spence, O.B.E., A.R.A., A.R.S.A.

WHY did you design a "modernistic" cathedral when there were so many wonderful examples of pure gothic architecture in England which could be your model, giving perfect opportunities for a detailed copy? This question was often put to me during the last three months, while I was travelling through Canada.

The answer is simply that I have studied these ancient cathedrals very carefully, being a Pugin student, for knowledge of Gothic was absolutely necessary before the prize could be awarded; and what I have tried to do is to apply what I thought to be the underlying principles of our own native architecture here in Britain.

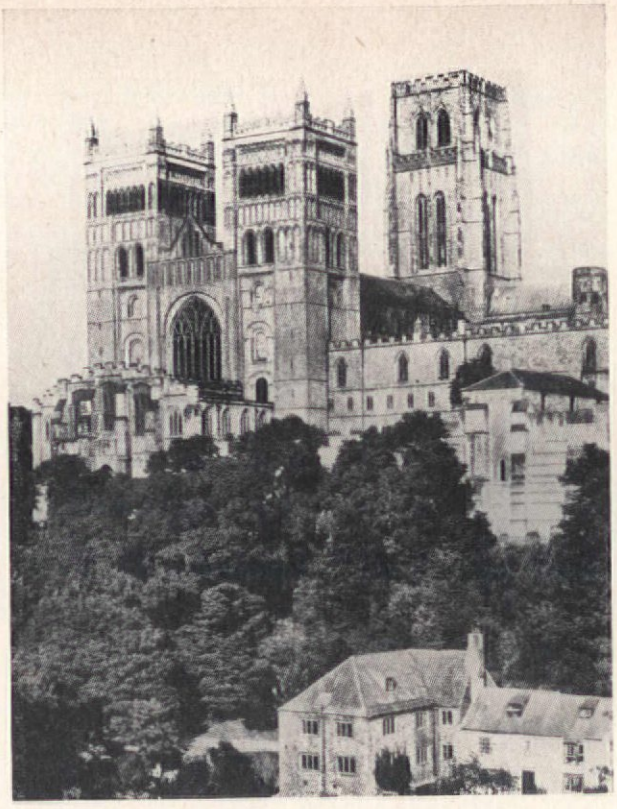
Gothic architecture displays certain qualities, perhaps the most arresting of which is that their buildings were always modern when they were built, displaying a strong faith in their time, invention and courage. Things were done sometimes without adequate knowledge, with the result that spires and even vaults have fallen down. It is this spirit of inventiveness and faith in your own time, plus the great respect for the temple form, as this developed through the ages in the church of England, that dominated my approach to the rebuilding of Coventry Cathedral.

Some past examples are interesting. Durham, for instance, built eight hundred years ago as a modern building, strong, clear cut. The massing shows no hesitation whatever. This building has great vitality and poise, vitality that is felt to this day. Moreover it has the quality of looking as well in the rain as in the sun, and is a wonderful example of that fourth dimension of quality and depth in building. Another great example is Gloucester, especially the great east window behind

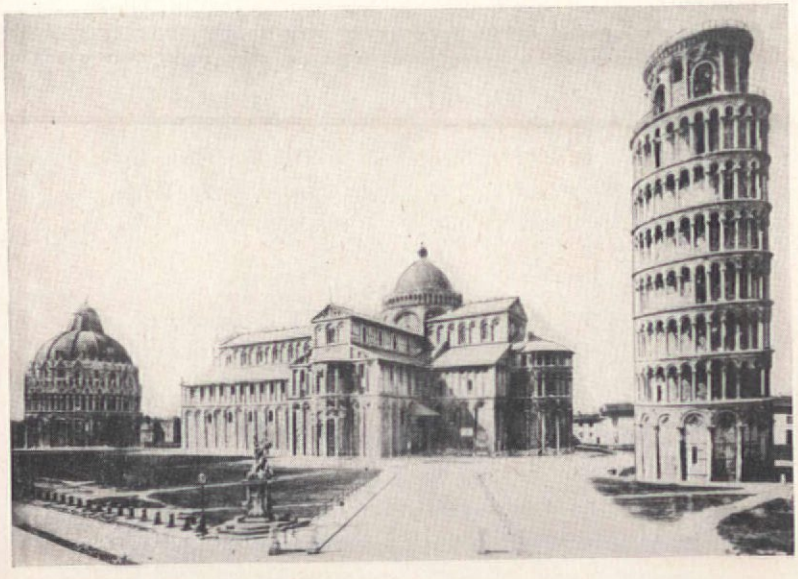


the altar and the choir. Built in the middle of the fourteenth century and replacing a Norman choir, it showed the wisdom of the ecclesiastical authorities in encouraging the latest methods of design and construction, as the Romanesque architecture which it replaced was mostly wall and little window, whereas now this beautiful cathedral has a great east window 70 feet high and 40 feet across.

But England alone does not hold all the examples. An architect must throw his net wide. Let us look at



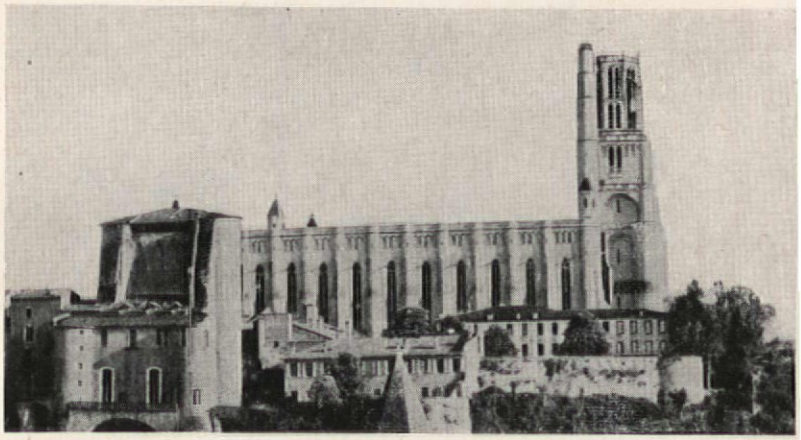
Among the cathedrals which gave inspiration to the author include Durham (left) for its "great vitality and poise"; Gloucester (below), "especially the great east window"; and Pisa (below, left) for the clarity of its grouping and its "quality"



Pisa with the four elements, the basilica, the baptistry, the campanile and the campo santo, placed together with Grecian clarity and exactness, buildings that group in the third dimension and possess the fourth, quality.

At Ravenna, too, there are buildings which inspired me greatly, St. Apollinare in Classe, which is just outside Ravenna, built many hundreds of years ago as an early Christian basilica. This has for its massing a simple dignity of immaculate proportion and fenestration. The elements are all clearly defined, but externally it does not say much. It is a dignified building with an invitation to enter. It is the interior which matters, for here is the altar and it is here where men worship. The altar is enshrined in the most beautiful and dignified material, culminating in the apse, which is one of the most lovely mosaics I have ever seen, still a blaze of colour and as brilliant today as it ever was. The interior is rich with marbles and is flooded with a soft golden light through the alabaster windows. This building truly functions. Entering, the great surprise sweeps the

Also Ravenna (left) — "the altar is enshrined in the most beautiful and dignified materials"; and Albi for its impressive grandeur



visitor off his feet and turns him from a common visitor into a worshipper. It is this philosophy of design which had a strong bearing on the line I took in the rebuilding of Coventry Cathedral.

Very similar also is the effect at Albi in the south of France, a romantic town dominated by the cathedral, which is on the highest ground, standing there like a great hen with little chicks around her. But when you walk up to the cliff-like walls there is an impressive grandeur about the exterior, which is perhaps lacking in many other examples; it is severe and very dignified. It is only when one enters that the real magnificence of this building is appreciated. The philosophy is the same as that at Ravenna.

When I received my conditions for the rebuilding of Coventry, while I was in Edinburgh, I read them and was tremendously stimulated. I would like to quote the preface written by the Bishop and the Provost.

"The Cathedral is to speak to us and to generations to come of the Majesty, the Eternity and the Glory of God. God, therefore, direct you.

"It is a Cathedral of the Church of England. In terms of function, what should such a Cathedral express? It stands as a witness to the central dogmatic truths of the Christian Faith. Architecturally it should seize on those truths and thrust them upon the man who comes in from the street.

"The doctrine and the worship of the Church of England is liturgically centred in the Eucharist. The Cathedral should be built to enshrine the altar. This should be the ideal of the architect, not to conceive a building and to place in it an altar, but to conceive an altar and to create a building.

"In the Anglican liturgy it is the people's altar; the altar should gather the people, it should offer access for worship and invitation to Communion.

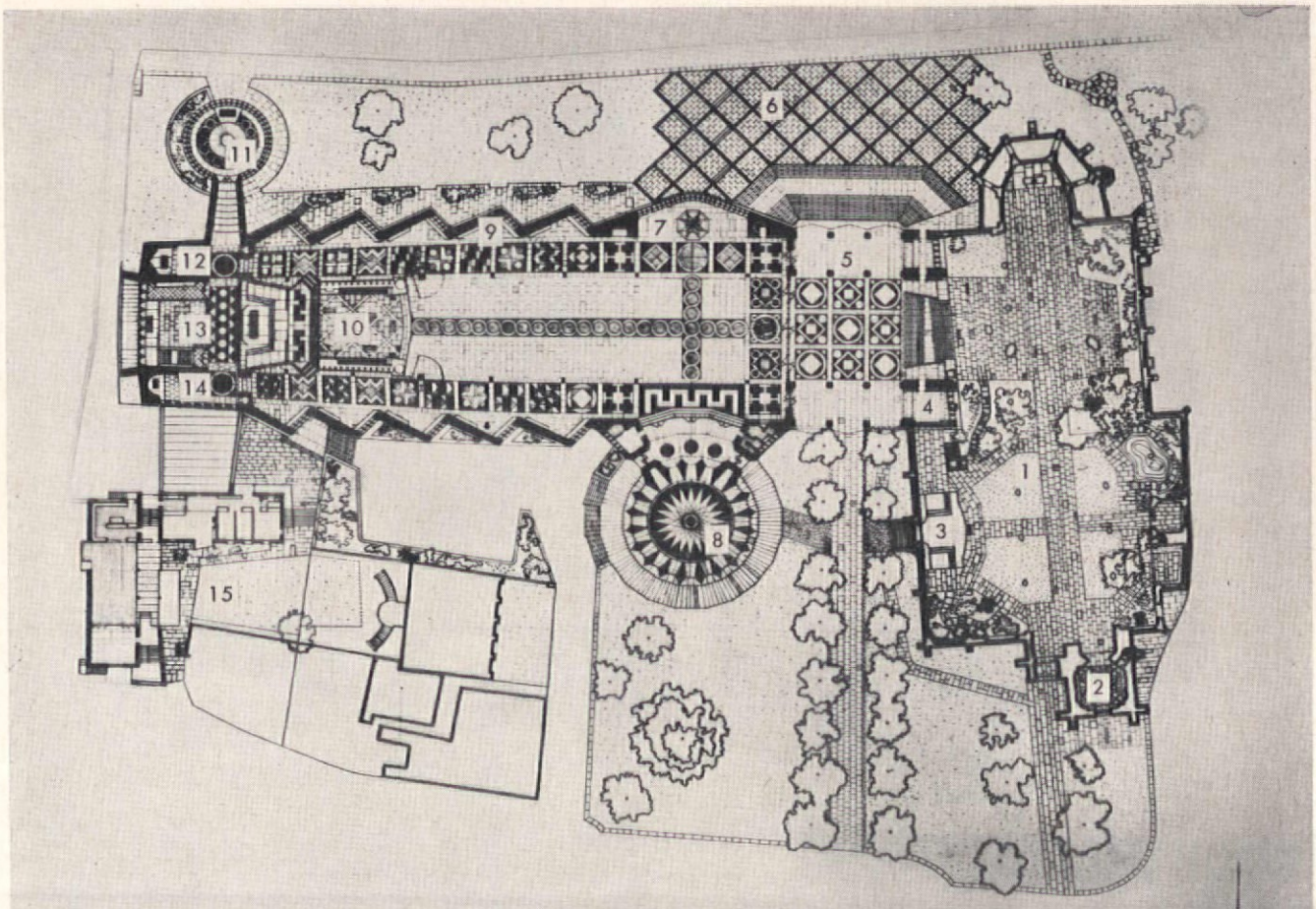
"With the altar — in the unity of worship — there is the preaching of the Gospel among our people of Coventry and the interpretation of the Word.

"The theology of the Cathedral we put before you to direct your thought. Prayer will be with you from the Cathedral Crypt and from the Diocese of Coventry. May God be with you in this great matter."

I determined at once to visit the site and see for myself. This Cathedral, as we all know, was bombed during the first of the great German air raids on Britain. It was destroyed by fire bombs on November 14th, 1940. There was great loss of life and property, but when I set foot in these ruins I realized I was walking on hallowed ground. Instead of the beautiful six hundred-year-old roof, this cathedral, because a cathedral it still is, has the skies as a vault. This feeling of reverence was intensified when I walked up to the altar which was erected during the war by a stone mason, from the stones which had fallen from the upper parts of the cathedral. Behind it is the charred cross made of beams that had not quite burnt out. This is an eloquent symbol, and a relic of faith during Britain's darkest hour, and I must admit to feelings of deep emotion when I saw this and read the words carved behind — "Father forgive."

I went to the site and looked out through the ruined windows over the ground reserved for the cathedral, and in a flash I saw in my mind's eye a beautiful new one growing out of the old, keeping the ruins as an integral part of the whole scheme. The picture I saw was a sparkling and beautiful altar at the end of a long vista backed by a great picture, the body of the nave spread out in front of the altar, but I did not see it clearly because in front of my eyes floated the bodies of the saints and the martyrs and it was through their bodies that the altar could be seen. We all know the price of this new altar — 1200 people killed and many, many more maimed and injured for life, 5,000 homes wiped out even with the people in them, 60,000 homes damaged, apart from the tremendous industrial damage. So the new altar will be seen through the saints and martyrs.

I took back with me to Edinburgh this idea seed, which continued to grow from that moment. Part of the new accommodation required is a chapel of unity where all church denominations could worship. This is a won-



1 CATHEDRAL RUINS
2 TOWER
3 OPEN AIR STAGE
4 CRYPT CHAPEL ENTRANCES
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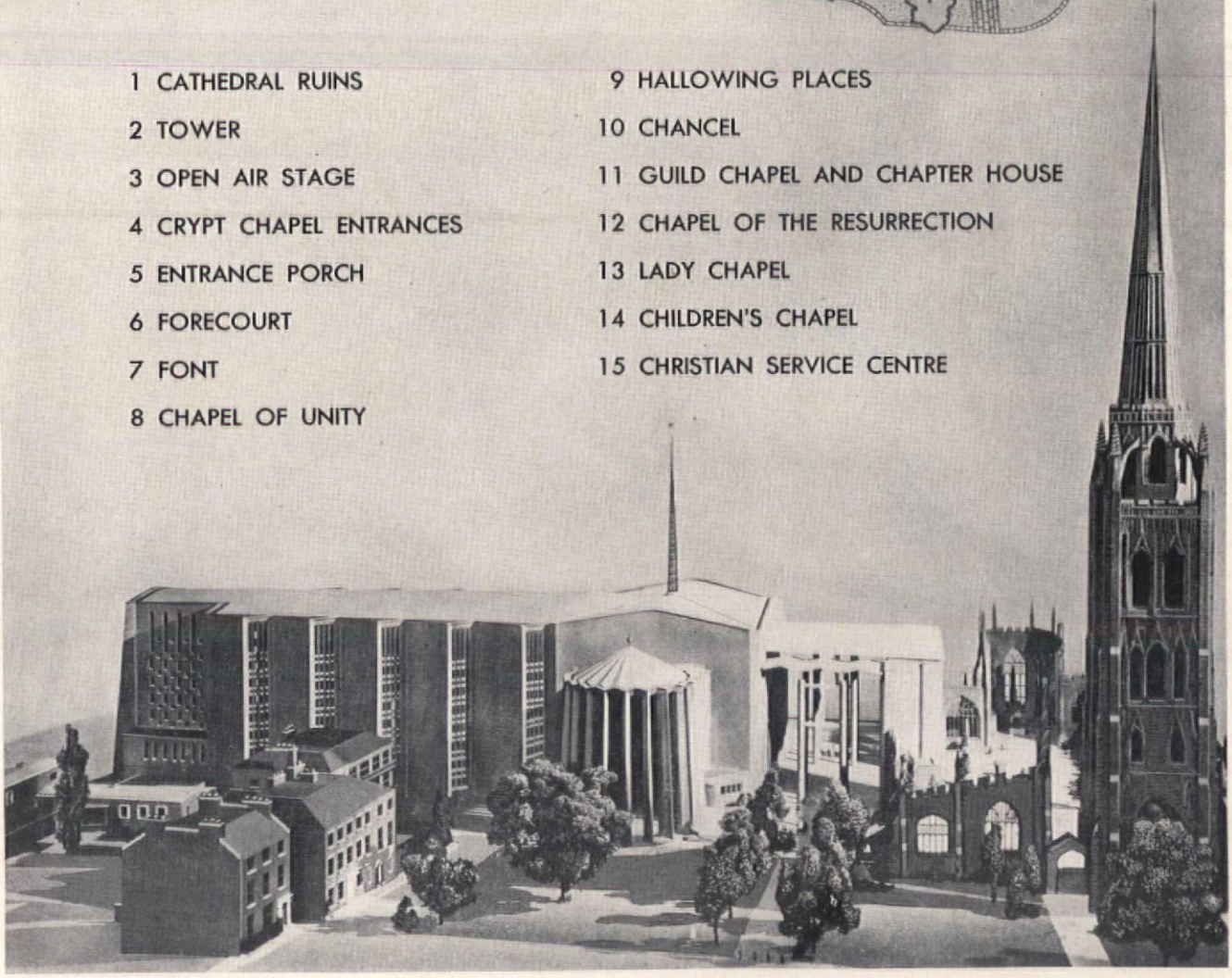
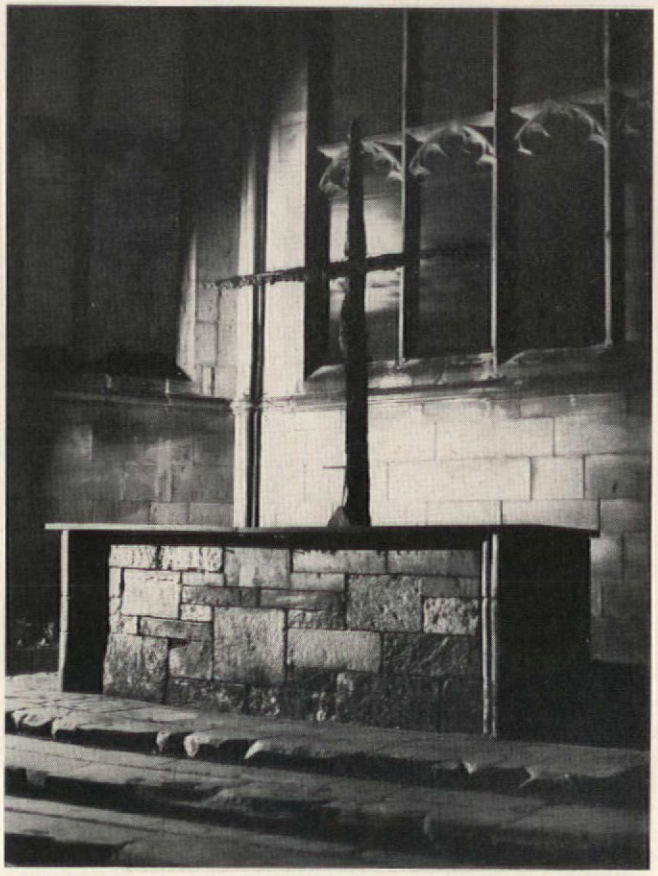
6 FORECOURT
7 FONT
8 CHAPEL OF UNITY
9 HALLOWING PLACES
10 CHANCEL
11 GUILD CHAPEL AND CHAPTER HOUSE
12 CHAPEL OF THE RESURRECTION
13 LADY CHAPEL
14 CHILDREN'S CHAPEL
15 CHRISTIAN SERVICE CENTRE

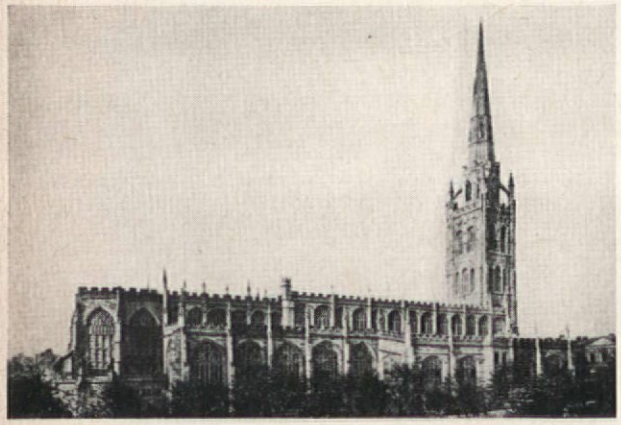


derful idea, worthy of strong architectural expression. I felt that this chapel could express unity and strength, and looking for a symbol to express it, I chose the star — a great star which will form a pattern on the floor, as the Star of Bethlehem was the first sign of Christian unity.

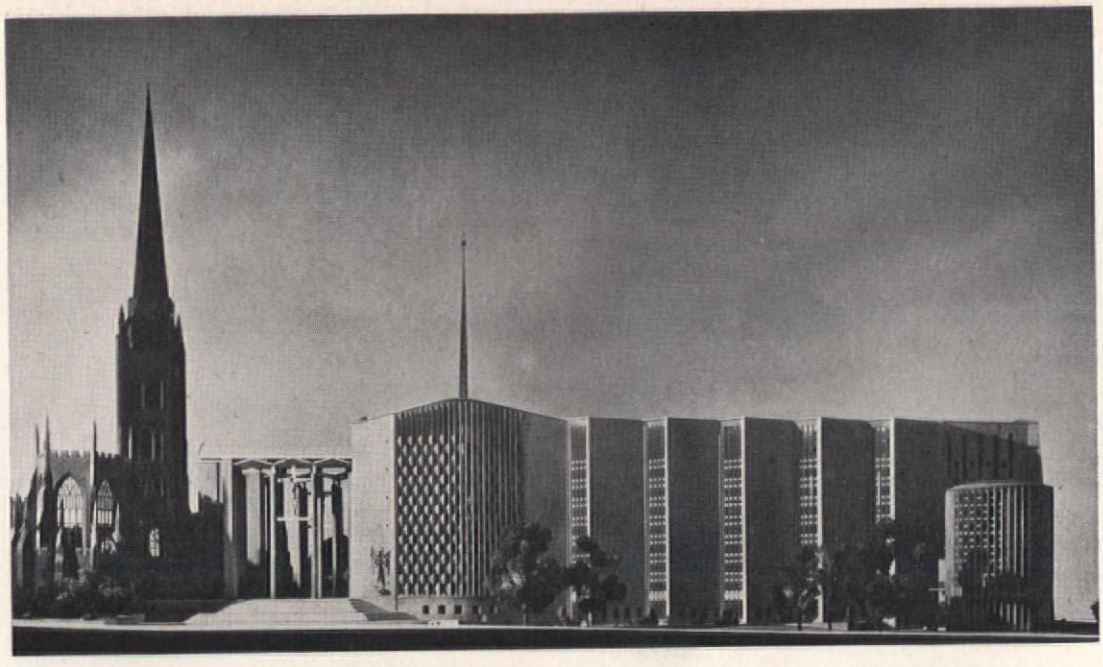
So opposite this chapel inside the new cathedral is the font. Because the font represents birth and virility and the rebirth of this cathedral, it is a very important feature. The font has a cover, a tall spire-shaped form, which rises to 80 feet. Behind it is a great window of 198 little windows. In each of these, I hope to have stained glass designs representing the saints in infancy, and the window will be carried out in the clear pure colours of birth and innocence.

People entering the cathedral first will see no other windows apart from this one, but their eyes should be drawn toward the altar, and beyond it to a great tapestry over 80 feet high and over 40 feet across. On this, in brilliant colours will be woven the figure of Our Lord seated in the glory of the Father with the four beasts, exactly as Saint John the Divine describes in his vision of the fourth chapter, Book of the Revelation. This tapestry is being designed by Graham Sutherland.

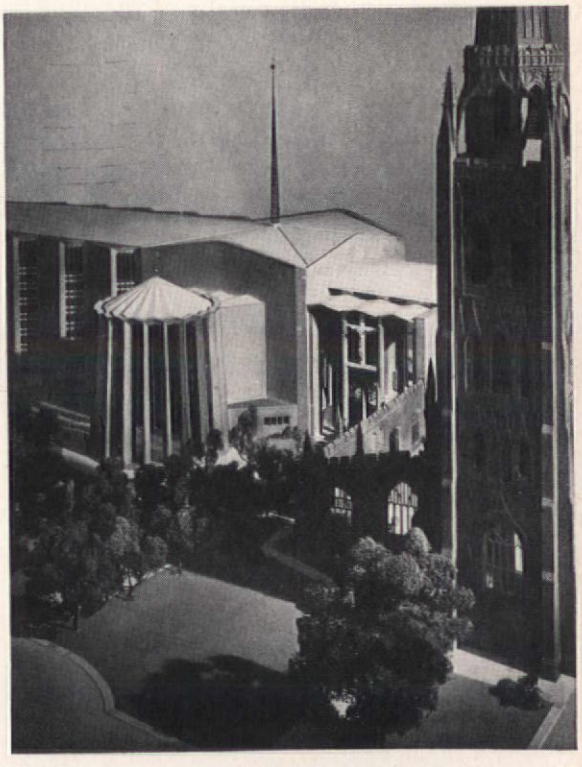




From Coventry Mr. Spence found inspiration in the simple altar built by a stone mason in the ruins of the cathedral, "a relic of faith during Britain's darkest hour," and from the ruins themselves, which he insisted be preserved as an integral part of the scheme for the new church



". . . I saw in my mind's eye a beautiful new one growing out of the old . . . a sparkling and beautiful altar at the end of a long vista . . . but I did not see it clearly because in front of my eyes floated the bodies of the saints . . ."



As you walk toward the altar you will realize that the windows reveal themselves as you reach them, because they are blotted from view by cliffs of stone, and you will only see them as you pass them.

There are five pairs of windows 70 feet high on opposite sides of the nave, each pair representing an age of man. The first pair grow from our birth — and represent childhood. These are strong virile windows in stained glass, strongly patterned. The colour is predominantly green and other colours allied to green, such as yellow and blue. These will present the young shoots growing out from the ground to the full height.

The next pair shows childhood growing into manhood and womanhood, the age of passion and strength, and these windows are predominantly red.

The next are the middle life with the experiences of middle life represented by the colours of the rainbow, some dark, some light, some brilliant and some dull.

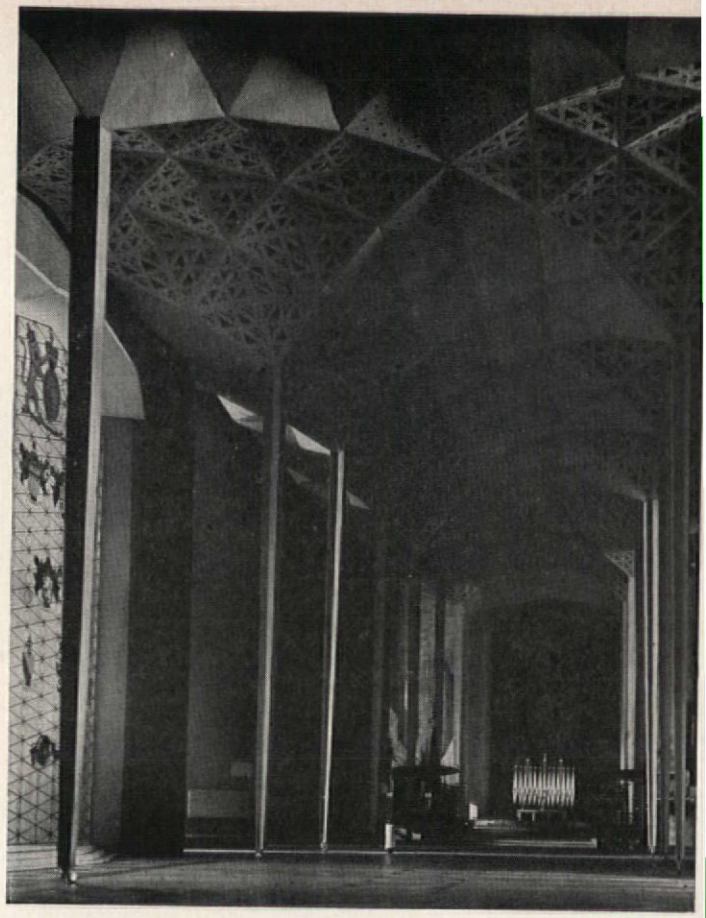
Still going toward the altar, the next pair represent the richness and wisdom of old age and are deep blue and purple, flecked with gold.

You will notice that the windows are gradually becoming darker and richer as you move toward the altar; the last pair represent the after-life. These are the altar windows of golden glass. The light from these windows shines directly on to the altar, so as you approach the holy table there will always be this aura of golden light around it. But when you reach the altar and turn around, for the first time you will see all the windows at once. I do not know of a church so far built that does this. As you know life, you experience the present and can look back into the past, but you cannot see the future. But when you reach the altar, the whole pattern is revealed for the first time.

The two ranges of windows leading up to this climax represent on the right, the perfect side which is God, and on the left, the "man" side, a reflection of the perfect side but imperfect in its reflection, as man is always striving for perfection — rather like trees reflected in a pool disturbed by the wind. One is the truth and the other is rather an uncertain reflection of the truth. But at the altar both are joined in a blaze of glory.

As an instance of this, the wisdom window on the man side represents a great and beautiful chalice as the most beautiful thing a man can make in his wisdom. This is a strikingly rich window showing this chalice studded with jewels and brilliant in purple, blue and gold. But on the God side, the window represents the lily of perfection as the miracle of planting a seed. Something so perfect as a lily growing cannot be imitated and even under a microscope the lily is still perfect.

A cathedral in England has a greater purpose than a church in which only to hold services. The Cathedral will open every day and must speak all the time, even when there is no sermon to be heard or anthem to be listened to. It must speak itself. The object of this cathedral is to turn the visitor who may go into the cathedral alone for a half hour's peace — to turn him from a visitor into a worshipper.

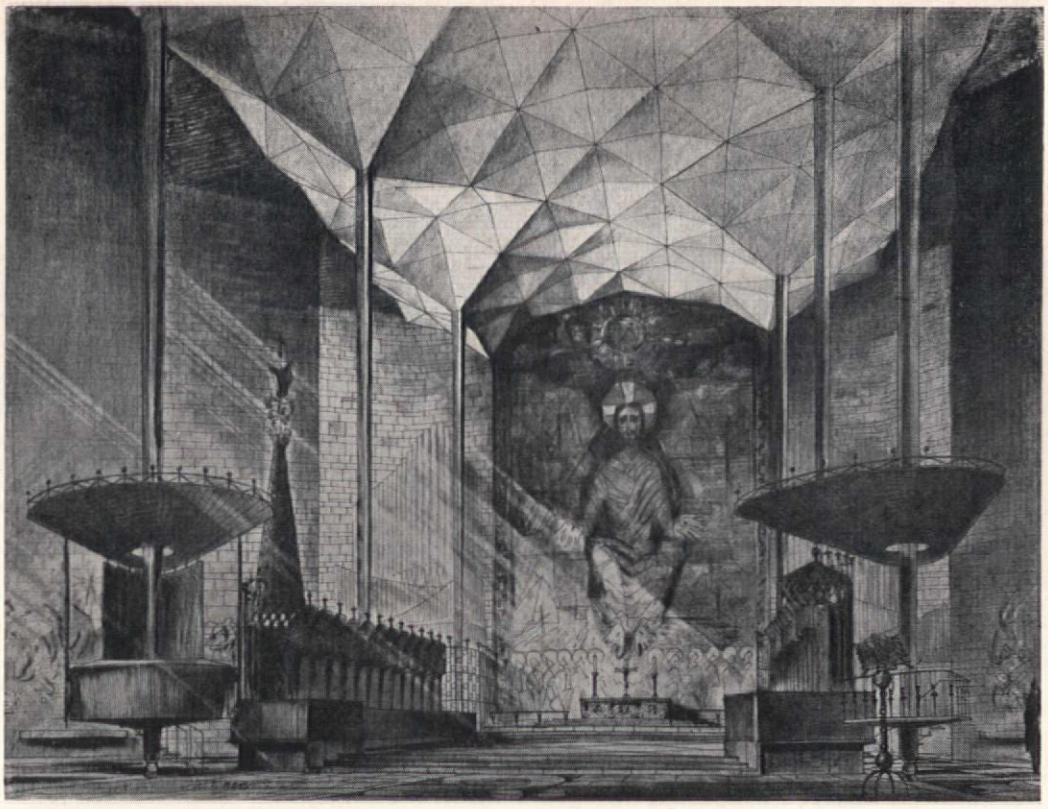


Work has already started. The glass, which is possibly one of the largest single commissions for stained glass ever given, has already started. When these windows are shown to the world, it will be realized that the artists in the Royal College of Art are recreating the spirit that existed when the glass was put into Chartres and in York and Canterbury. These windows are contemporary but they pay great respect to the past, and knowledge from the past is used as an inspiration and a stimulus.

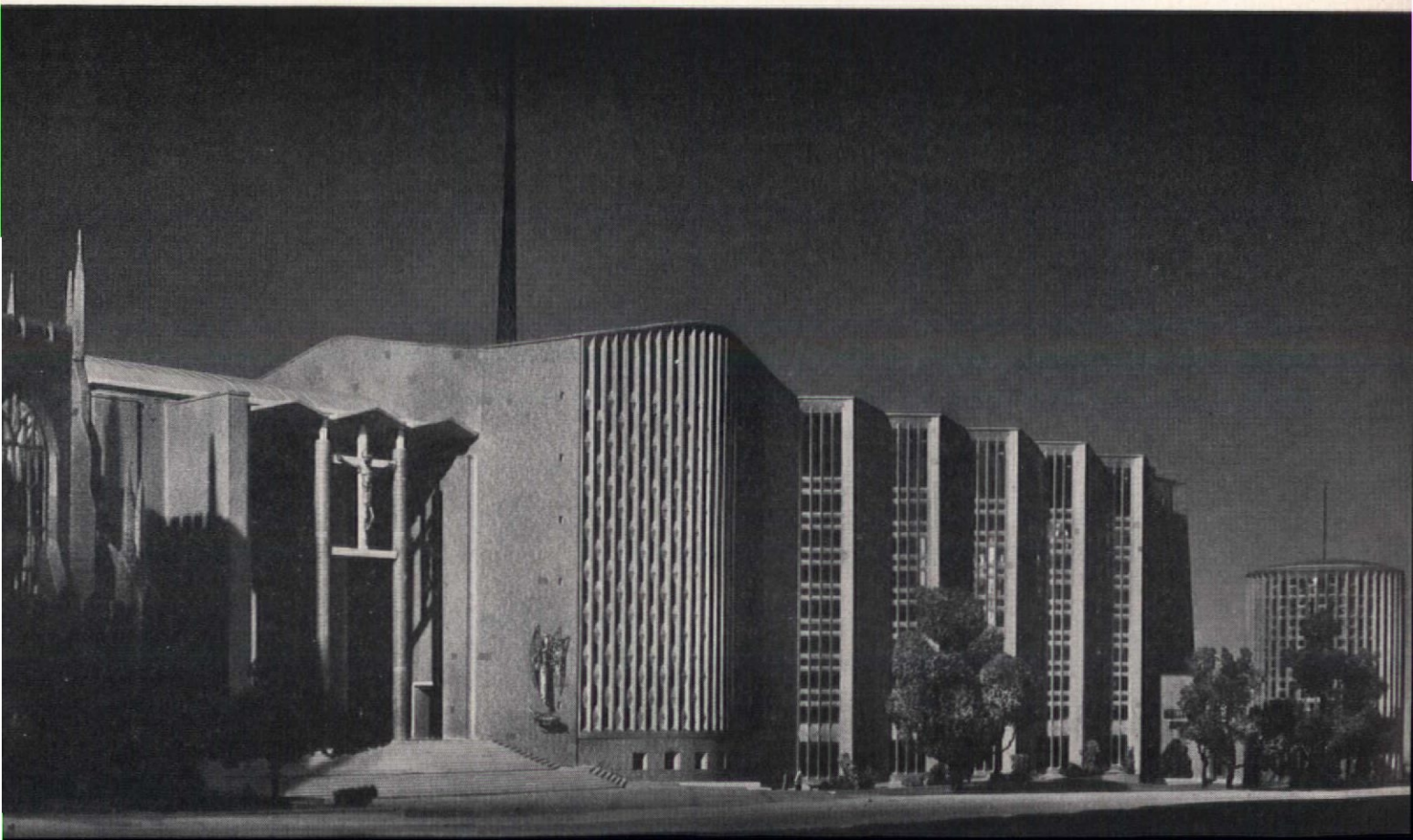
The tapestry designs by Sutherland are well advanced, and this brilliant English artist will produce a tapestry for what must surely be one of the most difficult problems any artist in recent years has had to face — an ecclesiastical subject on the vast scale of 80 feet high and 40 feet across.

Work has started too on the great west screen of engraved glass. The artist, John Hutton, has been designing and experimenting with glass engraving for the last year. This wall of glass is larger than the tapestry.

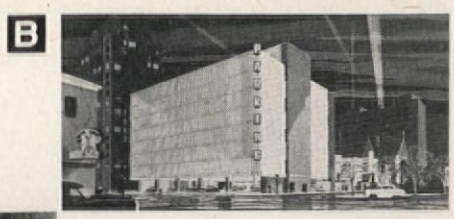
The organ, which should in itself be a work of art, has been ordered; and it may be worth while noting that the Canadian College of Organists has already donated $30,000 towards this. And finally, the stone for the Cathedral is being cut now, and we hope to start on excavations and site during April 1954.



The vault will be a free standing structure within the building, of concrete on 14 steel columns or legs resting on crystal balls. The author mentions in his notes the inspirational quality of the vault in King's College Chapel, Cambridge (shown at left)



NINE GARAGES FOR CITY OF CHICAG



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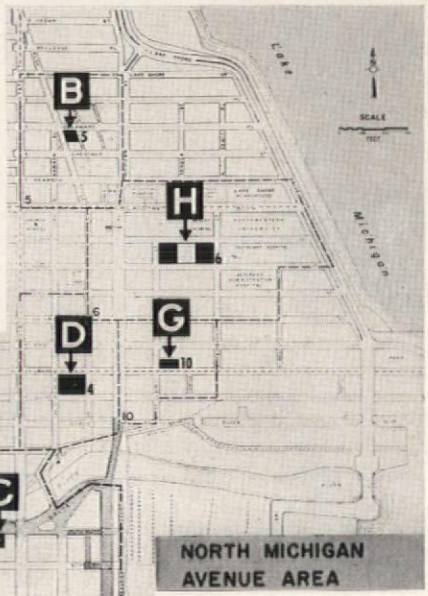

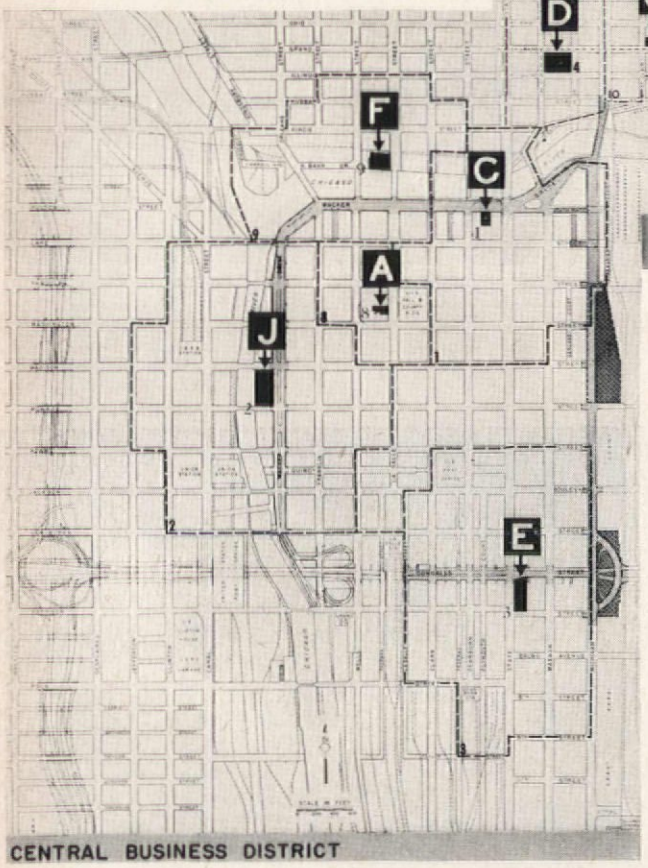

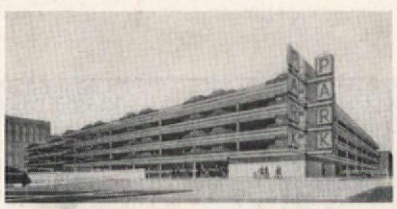

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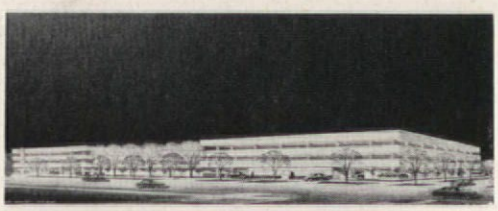

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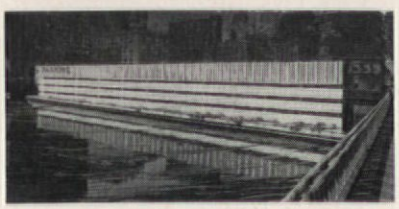


J

IAKE A FRONTAL ATTACK ON PARKING PROBLEM

Variety of Concepts by Nine Different Architects

GENERAL ADMINISTRATION:

The Chicago Department of Public Works, Bureau of Engineering;

Martin H. Kennelly, Mayor

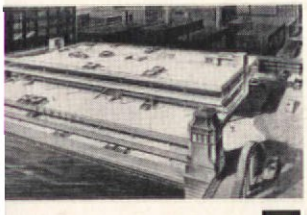
V. E. Gunlock, Commissioner

Dick Van Gorp, Chief Engineer

M. J. Glicken, Architect

CONSULTING ENGINEERS:

De Leuw, Cather & Co.



F

G

THE ARCHITECTS:

A *Friedman, Alschuler and Sincere*

B *Loebl, Schlossman and Bennett*

C *Shaw, Metz and Dolio*

D *Schmidt, Garden and Erickson*

E *Everett F. Quinn and Associates*

F *Graham, Anderson, Probst and White*

G *McClurg, Shoemaker and McClurg*

H *Holabird and Root and Burgee*

J *Naess and Murphy*

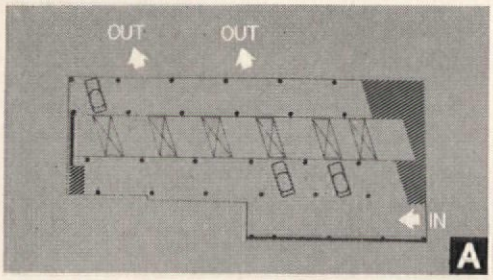
A PROBLEM typical of nearly every American city is that of providing adequate and convenient off-street parking for the increasing stream of cars that is strangling urban commerce and mobility. Consultants warn that, unless attacked, the problem will become worse, since suburban growth and the development of peripheral shopping centers is expected to offset only in part the anticipated population increase and wider ownership of cars.

In characteristically vigorous fashion, Chicago is doing something about it — constructing nine garages to provide approximately 6650 parking spaces; a multi-project which should yield tangible relief to that mid-west metropolis within 18 months. Total cost of land and buildings will approach 22 million. Of interest is the fact that the city has hired various local architectural firms and engineering consultants to design the structures. The program culminates nearly ten years of effort by city officials, civic organizations, business firms, and individuals, and received its official start when the city authorized the bond issue in September, 1952. The development is based upon a complete study of the entire problem made by De Leuw, Cather & Co., Engineers, who were retained by the five banking firms marketing the bonds.

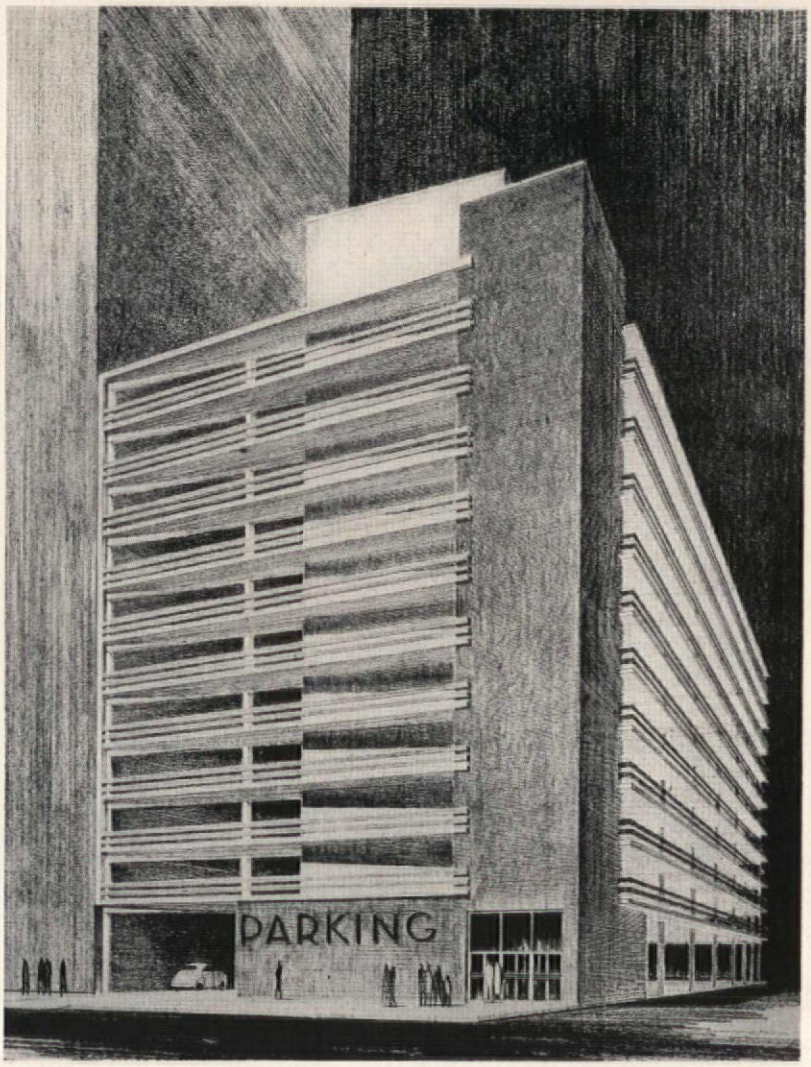
Five of the nine structures will be built in the "Loop" or central business district (lower portion of map), and four in the North Michigan Avenue area (top of map). Construction of three is under way; the remainder will be advertised by summer; and all of the buildings are scheduled for completion by summer, 1955.

Each of the garages will be classified as fireproof and will be built with floors and ramps of flat slab or concrete pan construction and with parking areas open to the air. Several have precast or aluminum louvers to minimize noise and screen the cars from view. In addition to concrete spandrels, three schemes have aluminum railings for peripheral barriers while one design features vertical cables held in tension by special springs as an outer guard. Certain exterior portions will have brick or granite facings. Waiting rooms, offices, etc. will be of glazed tile with aluminum trim, windows, and doors.

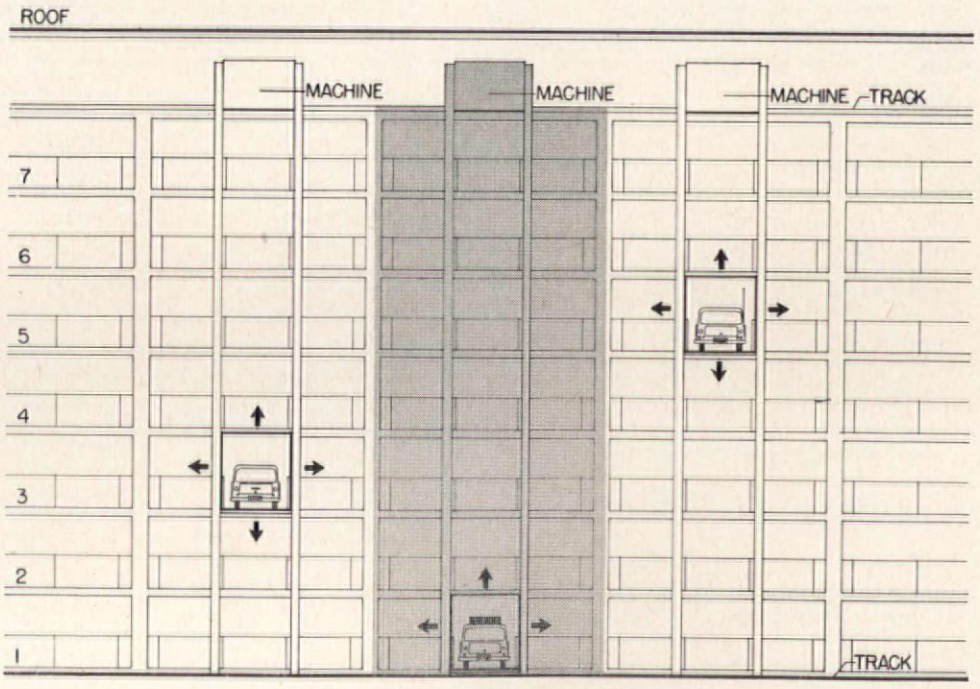
Of the nine schemes, six are of the ramp type, while three are of the "hoist" type, described more fully on the following two pages.

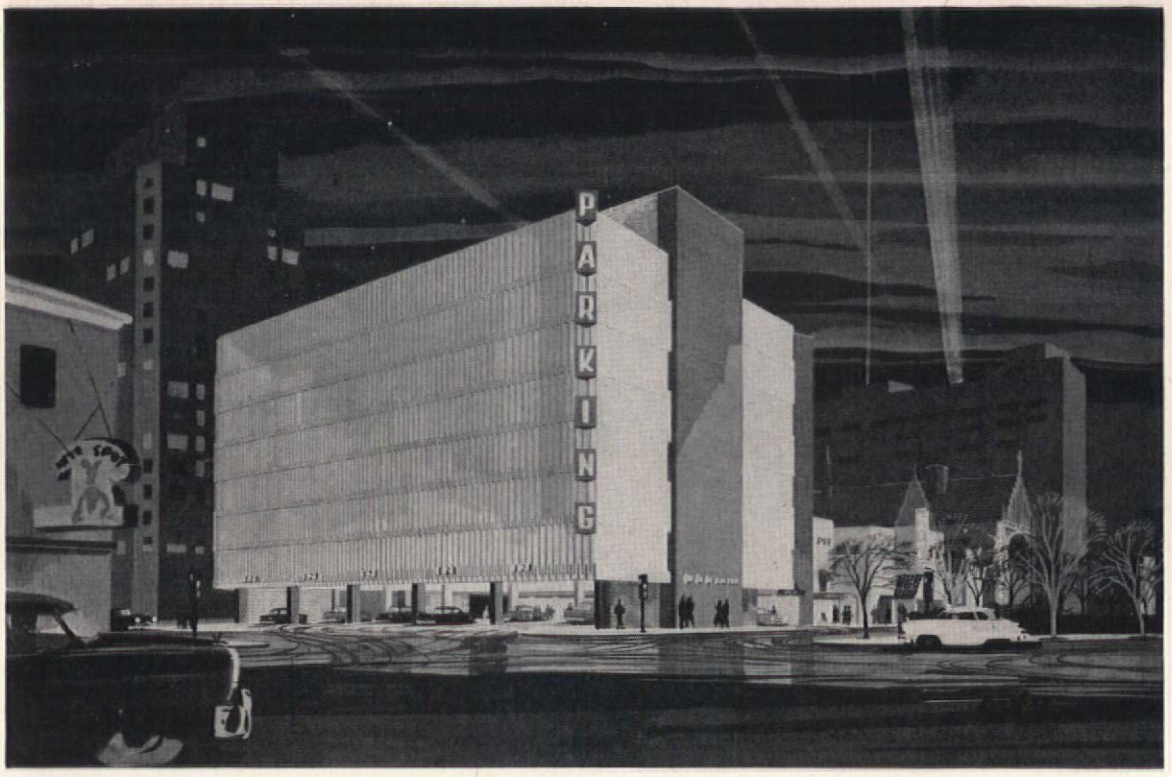


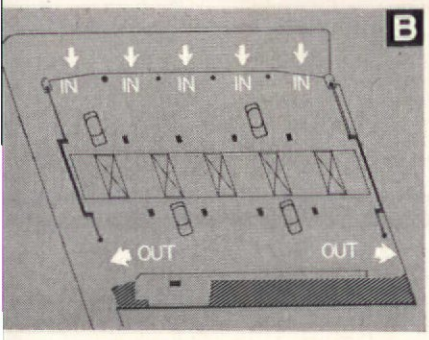
The 12-level scheme designed by Friedman, Alschuler and Sincere, Architects (right and above) will accommodate 495 cars and is intended primarily for short time parkers. The hoist shaft, separating entrances and exits, will be brick sheathed, with granite faced lobby. Open floor slabs of architectural concrete will have aluminum guard rails



Three of the nine facilities will be of the "hoist" type, using equipment developed by the Bowser Engineering Co. of Des Moines, Iowa, which features an elevator suspended from a crane so that the automatically controlled travel to or from a preselected parking stall is vertical, horizontal, or diagonal. It is claimed for the system that the average time required to park or deliver a car is one minute. The diagram below illustrates the scheme.







Architects Loebl, Schlossman and Bennett's 8-level scheme for 420 cars (above and left) is characterized by an outer screen of precast louvers to hide cars yet allow ventilation. The central elevator shaft is glazed brick faced

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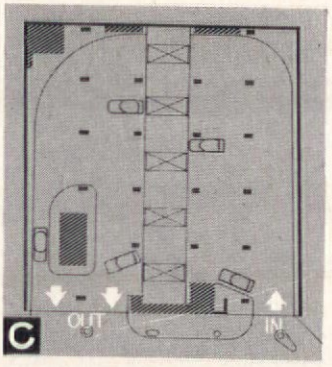
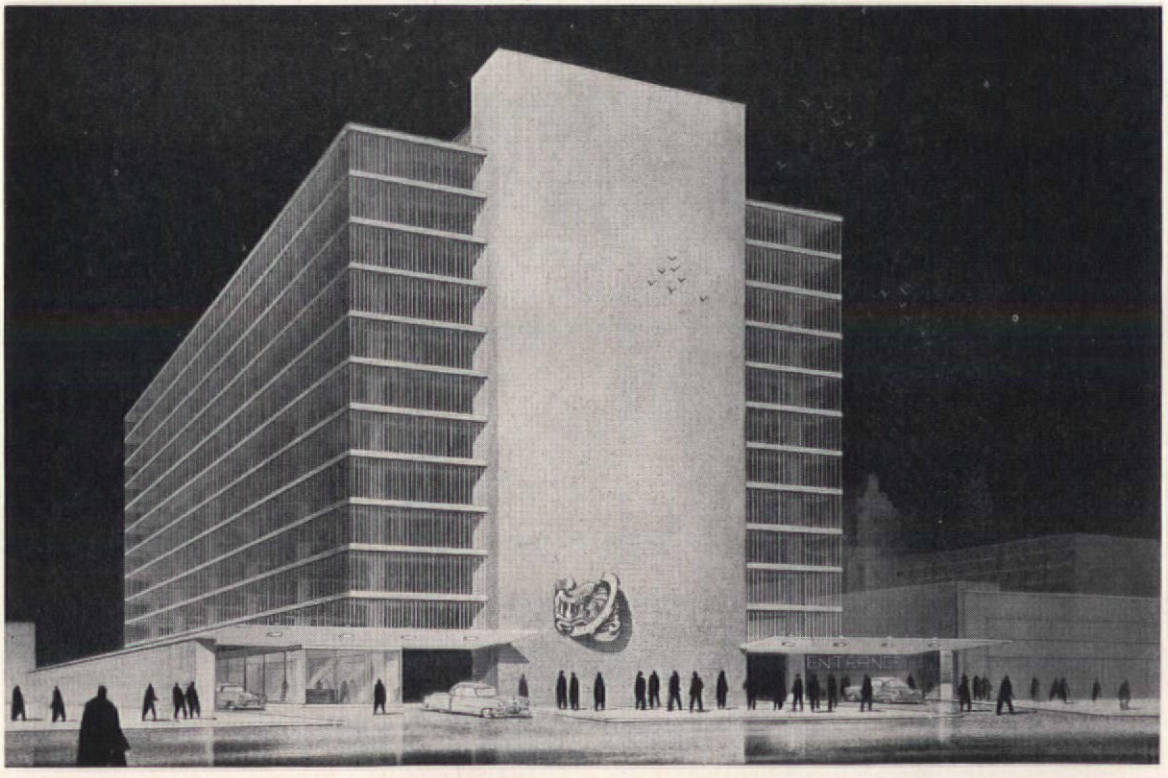
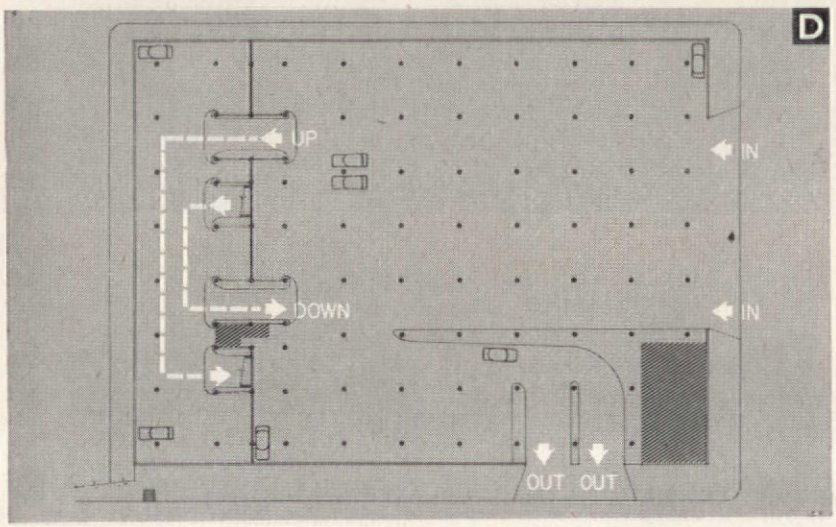
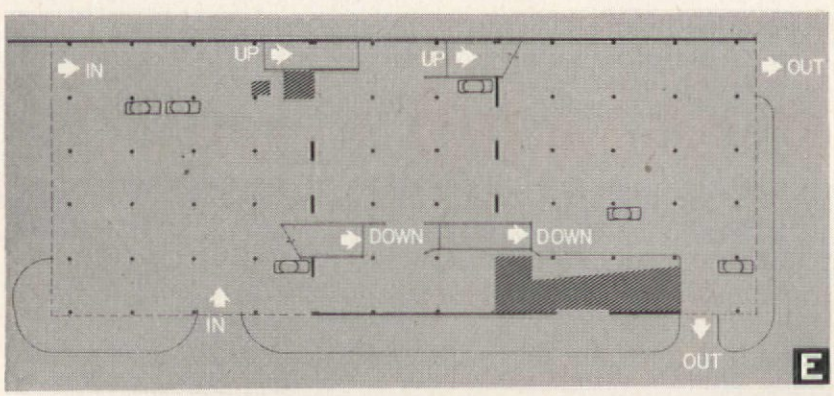
The design by Shaw, Metz and Dolio, Architects, (below and right) will park 715 cars on 14 levels and features a protection barrier of stainless cables in tension. Lift shaft is blue glazed brick with aluminum sculpture by Milton Horn



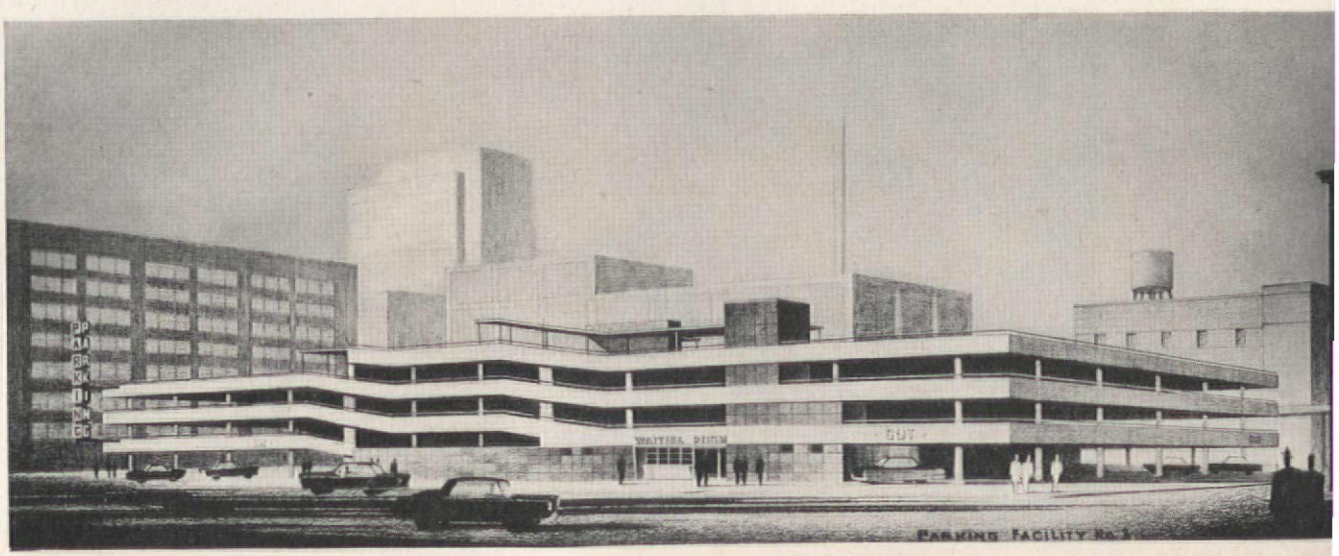


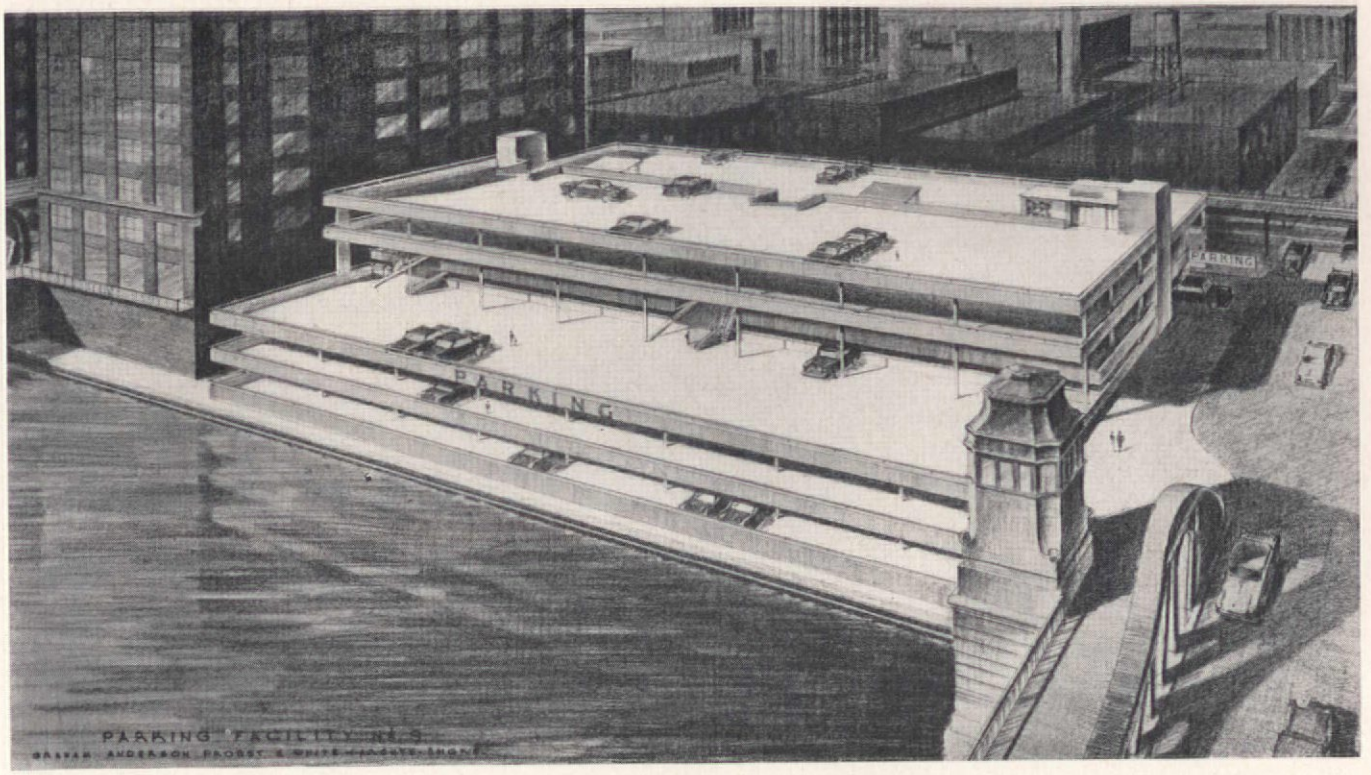


A ramp-type structure for 1000 cars, the garage designed by Schmidt, Garden and Erickson, Architects (above and left) consists of five split levels. The horizontal treatment is emphasized by the concrete and aluminum guard rails; entrances are of face brick. Intensity of perimeter lighting automatically controlled photo-electrically

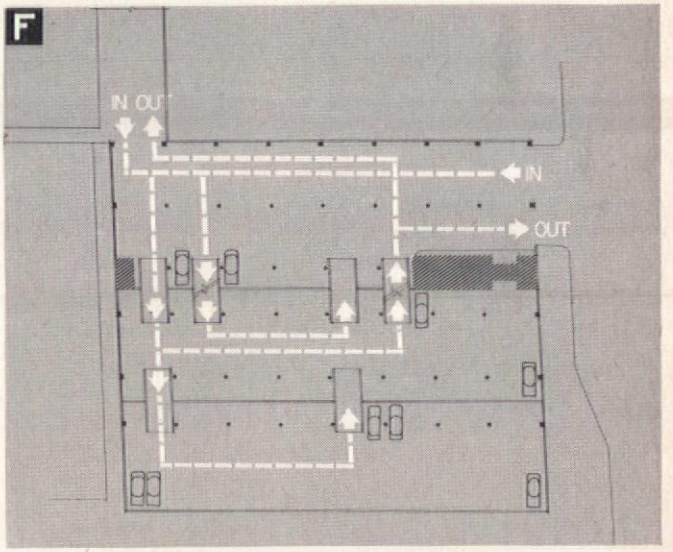


Capable of accommodating 665 cars, the ramp-type garage designed by Everett F. Quinn and Associates, Architects (below and left) is a split-level scheme four stories in height. The granite and face brick treatment at the entrances contrasts with the perimeter concrete guard rails at the various levels

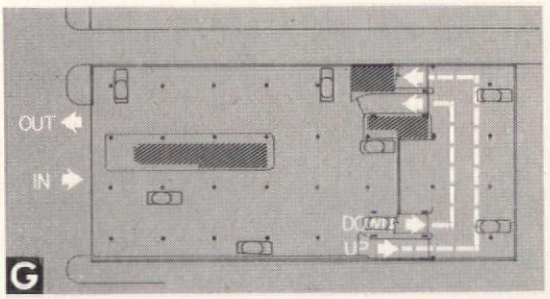


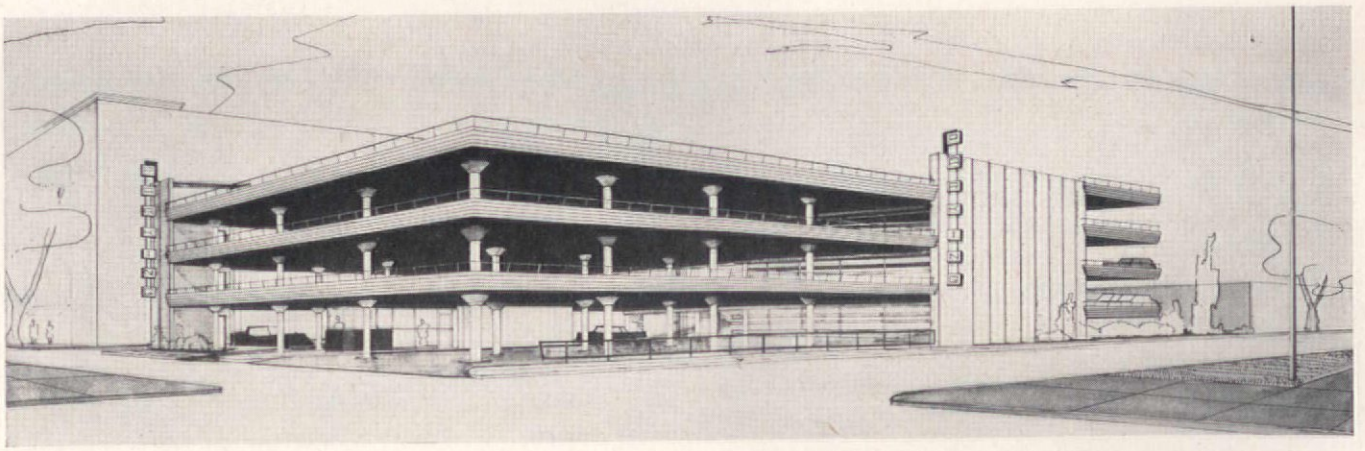


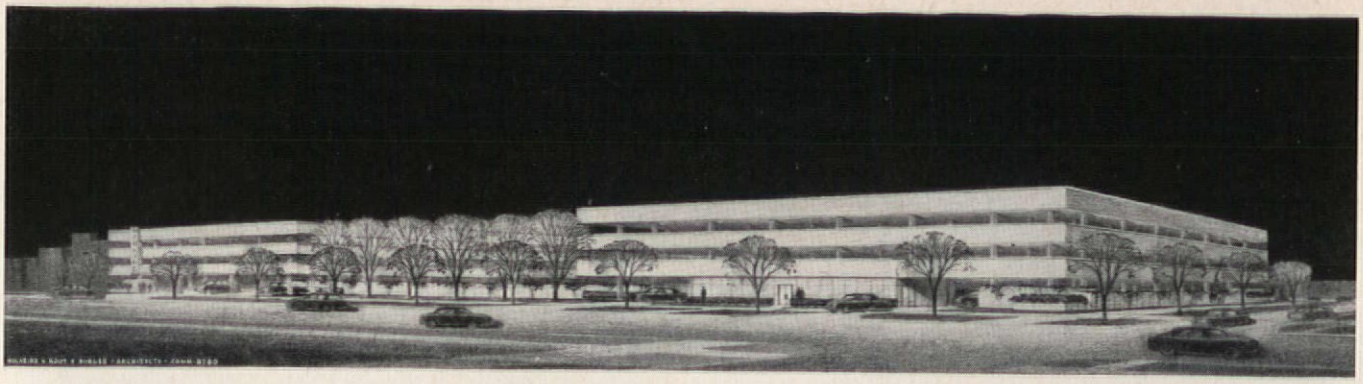
Part three level — part five, the design by Architects Graham, Anderson, Probst and White (above and right) will park 650 cars

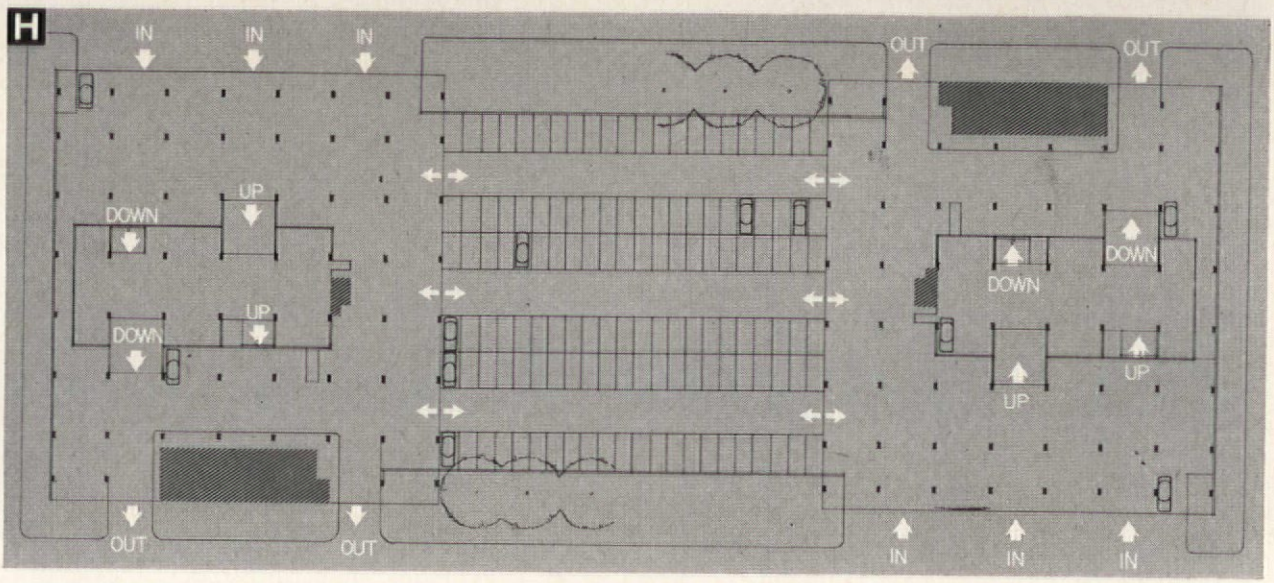


Architects McClurg, Shoemaker and McClurg's four level scheme (plan and rendering below) is designed to accommodate 260 cars









Unusual solution by Architects Holabird and Root and Burgee (plan and rendering above) consists of two buildings bounding a central parking lot enclosed by two serpentine walls

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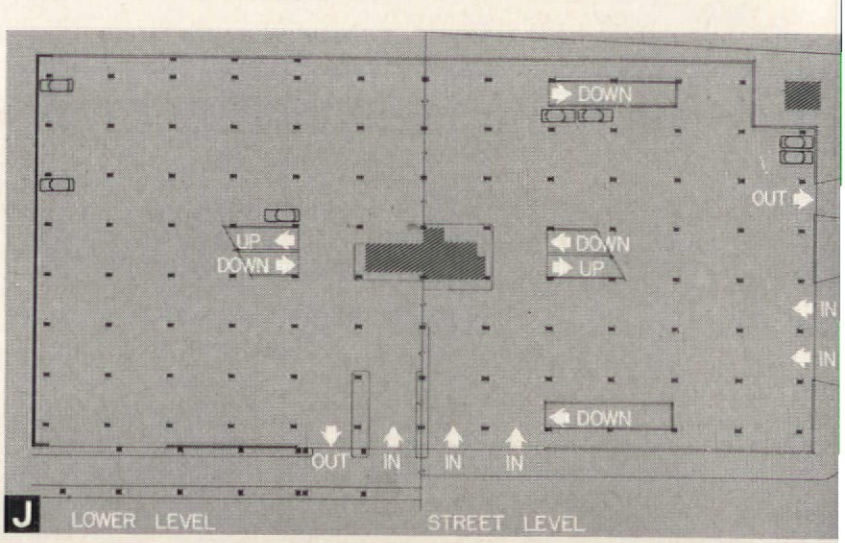
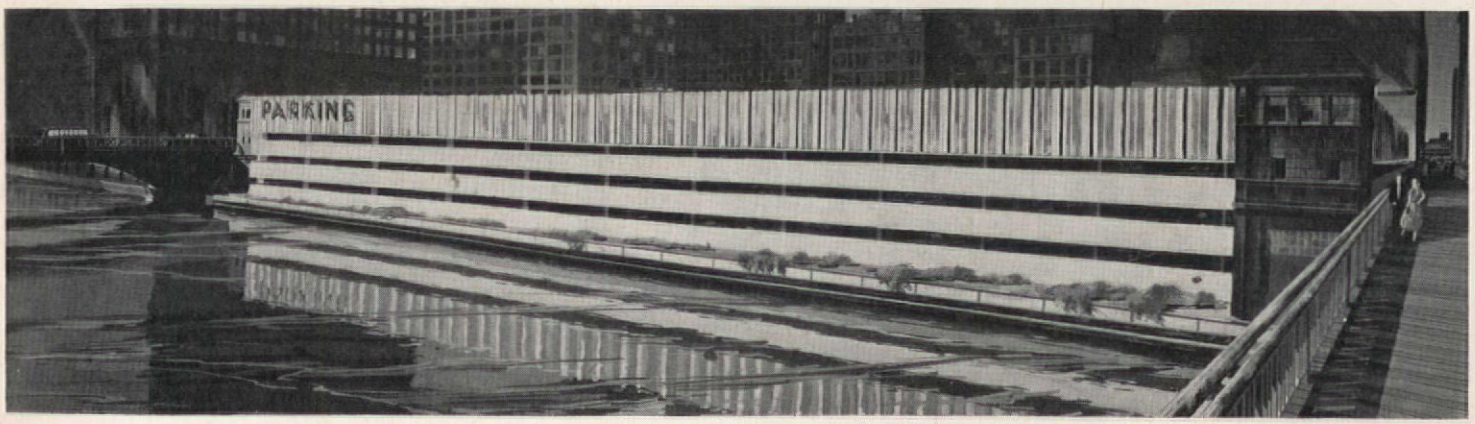
Prominently located on South Wacker Drive, the five level, ramp-type garage designed by Architects Naess and Murphy (right and below) will park 1230 cars





NUMBER 208

Hospitals and Health Facilities

STUDY

ARCHITECTURAL RECORD'S BUILDING TYPES ®

FEDERAL HOSPITAL PROGRAM TO ADD NEW BUILDING TYPES

HOSPITAL BUILDING TYPES STUDIES IN ARCHITECTURAL RECORD

Hospitals	July	1937
Chronic Hospitals	Aug.	1938
Hospitals	Dec.	1939
Health Centers	Sept.	1940
Hospitals	Aug.	1941
Hospitals in Wartime	Aug.	1942
Hospitals	May	1943
The General Hospital	Aug.	1944
Coordinated Hospital Service Plan.	Aug.	1945
Elements of the General Hospital	June, July, Aug.	1946
Hospitals	June	1947
Type Plans for the General Hospital	Jan.	1948
Hospitals	May	1949
Hospitals	Feb.	1950
Mental Hospitals	Oct.	1950
Tuberculosis Hospitals	Apr.	1951
Hospitals and Health Centers	Oct.	1951
Revised Elements of the General Hospital	Apr.	1952
Hill-Burton Hospitals	Oct.	1952
Hospital Planning Studies	Feb.	1953
Mental Hospitals	Nov.	1953

BOOKS:

"Psychiatric Sections in General Hospitals," by Paul Haun, M.D.

"Design and Construction of General Hospitals," by U. S. Public Health Service, published jointly by ARCHITECTURAL RECORD and *The Modern Hospital*

IN HIS RECENT MESSAGE to Congress, President Eisenhower made a strong plea for extension and broadening of the federally-aided program of building health facilities. He told the Congress:

"The modern hospital — in caring for the sick, in research and in professional educational programs — is indispensable to good medical care. New hospital construction continues to lag behind the need. The total number of acceptable beds in this nation in all categories of non-Federal hospital services is now about 1,060,000. Based on studies conducted by state hospital authorities, the need for additional hospital beds of all types — chronic disease, mental, tuberculosis, as well as general — is conservatively estimated at more than 500,000.

"A program of matching state and local tax funds and private funds in the construction of both public and voluntary non-profit hospitals where these are most needed is therefore essential."

The president then asked for extension of the program into new types of buildings. In his own words:

"I present four proposals to expand or extend the present program:

"1. Added assistance in the construction of non-profit hospitals for the care of the chronically ill. These would be of a type more economical to build and operate than general hospitals.

"2. Assistance in the construction of non-profit medically supervised nursing and convalescent homes.

"3. Assistance in the construction of non-profit rehabilitation facilities for the disabled.

"4. Assistance in the construction of non-profit diagnostic or treatment centers for ambulatory patients."

To activate the president's proposals, bills have been introduced in both the House and the Senate. The bills both call for the same authorization of federal funds: $20 million for diagnostic and treatment centers; $20 million for chronic disease hospitals; $10 million for rehabilitation facilities; $10 million for nursing homes; and $2 million for state surveys of needs, or a total of $62,000,000. These amounts would, of course, be in addition to the federal funds for normal hospital construction under the Hill-Burton program. The president asked for $50 million for that program in "fiscal '55."

000,000 has been completed in the last six years without such aid."

It doesn't require any reading-between-the-lines to see that the administration, however much it is interested in health, has given close inspection to the organization and operation of the existing federal hospital program. It has found them good. It has found a sound base on which to continue additional hospital construction and add new types of health facilities. Here the president said: "I recommend that . . . special funds be made available to the states to help pay for surveys of their needs. This is the procedure that the Congress wisely required in connection with federal assistance in the construction of hospitals under the original act. We should also continue to observe the principle of state and local determination of their needs without federal interference."

Mrs. Oveta Culp Hobby, Secretary of Health, Education and Welfare; Dr. John W. Cronin, Chief, Division of Hospital Facilities, Public Health Service; Marshall Shaffer, Chief, Technical Services Branch, Division of Hospital Facilities, Public Health Service

The fate of those proposals, at this writing, is not known. But the import is clear — the country has launched a major program of extending its hospital and health facilities through new construction, and that program is gaining, not losing, momentum. We want better health facilities; we are going to build them.

There are some other items worth looking at in the current situation. One that is obvious but important is that the Hill-Burton program, administered by the Public Health Service, has been an unusually happy experience as federal grants-in-aid programs go. It has not been a political football. It has not built an autocratic bureaucracy. It has relied on local initiative, has preserved local determination of need, local decision. For architects it is important that local designers have been used, and have been encouraged, while meeting some federal standards, to meet local desires. The program has, therefore, enlisted and combined local, state and federal participation, and local, state and federal funds.

An extremely important point, brought out by the president, is that it is one federal program that has not discouraged any private building enterprises. The president said: "This Federally stimulated accomplishment [106,000 hospital beds, 464 public health centers] has by no means retarded the building of hospitals without Federal aid. Construction costing in excess of $1,000,

Presumably, then, the program for the new types of facilities will be patterned after that of the old. It should be useful, therefore, to look closely into the operation of that program to see what has made it run so satisfactorily, and what might be expected in the future.

Here are some of the highlights:

1. A master plan, drawn even in advance of the Act, with priorities established. First priorities were given to health centers and hospitals for rural areas where the need was greatest.

2. Existence of state agencies to formulate and administer a state-wide program.

3. Preservation of local initiative by sponsor, architect, engineer, with federal and state functions limited. Each building program is initiated by some local group, which must build and operate its own hospital. The local sponsoring group applies for state and federal aid, hires its own architect, builder, and hospital staff.

Not the least important is the freedom given the local architect in the design and equipment of the building.

4. Prototype plans for guidance only. The Public Health Service staff of architects, under Marshall Shaffer, has carried on intensive studies of hospital planning, with the collaboration of medical, administrative and nursing groups. It has issued basic plan-

ning guides in the form of graphic type-plans for various departments of the hospital, type-plans for various sizes of buildings (published in previous Building Types Studies in ARCHITECTURAL RECORD). These were always understood, however, to be merely background information for the local architect, roughly the equivalent of research studies in planning, available to the architect but not mandatory in any sense.

5. Small, capable federal staff. The effort has always been to give guidance, never to do the actual work in any category of hospital activity. This principle of the program, growing out of the principle of local determination, has kept federal administrative costs to a very small figure — something like one-tenth of one per cent of the construction funds actually spent.

6. Cooperation of professional and industry groups at all stages of the program. Of current importance is the Federal Hospital Council, an advisory group of prominent laymen sitting on policy matters. This council has a Technical Committee on Architectural Standards, comprising four architects and two doctors. In formative years of the program other groups were very active, including the American Hospital Association, American Medical Association, American Institute of Architects, and others.

Those points, quickly stated, stand out as important, but they were not so quickly achieved. There is a thread of cooperation running through the entire operation which represents a massive accomplishment but which required long and careful nursing, as well as thoughtful planning. In any case, there now exists a great, nationwide network of dedicated individuals and groups, working formally and informally to extend and improve hospital building. It has frequently been observed, for example, that the mere existence of the state agencies may have done more good in the hospital field than the federal funds that originally caused their formation. The reason is, of course, that for the first time each state has an active group with a sure knowledge of state needs, a strong conviction and a program. Even without federal funds this sort of thing would be constructive.

In the same way, education in hospital matters has spread widely. This was a conscious part of the early plan, and Shaffer and others did much urging to initiate seminars on hospital planning, both in the A.I.A. and in the hospital organizations. To say that this effort has improved the design of hospitals would be putting it mildly — it has also clarified the need for hospital facilities and spread the determination to have them. Though less tangible than federal dollars, these factors may be more important in the end.

Architects and engineers will not miss another thread running through the entire scheme — every step was calculated to preserve existing professional and commercial relationships, to work within established practices and procedures. There is a carefully worked out procedure for submitting building proposals, plans, and contracts for the purpose of enlisting state and federal aid, but it is designed merely to expedite matters and save needless loss of time and money; it does not require a single step that would violate established practices. There is, for example, an understanding as to when the architect starts working drawings, and the effect of this has invariably been to save drawing time, by withholding this step until the building program has been thoroughly discussed and agreed upon, and the commitment made for funds. Single-line schematics are used up to this point, for all discussions of space allocations, circulation problems and so on. Thus when the working drawings are begun, the arguments have been settled and drawings do not involve false starts and major changes.

Similarly there is a model contract specification, a sort of reviewing guide, which was worked out with the help of the A.I.A. and the A.G.C., again largely to simplify procedures, not to dictate them, and, again too, to conform with established practices.

On the whole the Hill-Burton hospital program has been a satisfactory experience for everybody concerned. As a matter of fact, opinions on the workings of the program were exhaustively surveyed by the American Hospital Association, and summarized thus:

1. There has been general acceptance of Hill-Burton principles and program.
2. Hill-Burton is a well administered program.
3. It has resulted in better patient care through licensure of hospitals and improved standards of health care in hospitals and health centers.
4. Hill-Burton has provided a better distribution of hospitals and related health care.
5. Organized planning for hospital and health needs of all the people has been stimulated.
6. Better architecture is one of many excellent by-products.
7. Staffing and operational problems, even in small hospitals, have been partially met.
8. Hill-Burton has stimulated better hospital administration.
9. The program has preserved states' rights.
10. State Advisory Councils have contributed to broad thinking and sound planning.
11. It has been an asset to civil defense.
12. The program has advanced the cause of hospital safety.
13. Hill-Burton is an effective pattern of Federal, State, and local cooperation.
14. Present authorization of $150 million is adequate.
15. Present allotment formula is acceptable.

It is clear that, at a critical period, the Hill-Burton program has been re-examined and has passed its tests cum laude. It is clear also that this satisfactory experience promises well for continuation and extension of the whole program of health facilities.

Emerson Goble

LARGE HOSPITAL WITH A CHEERFUL LOOK

108-Bed Hospital Planned for Three More Stories, 117 More Beds

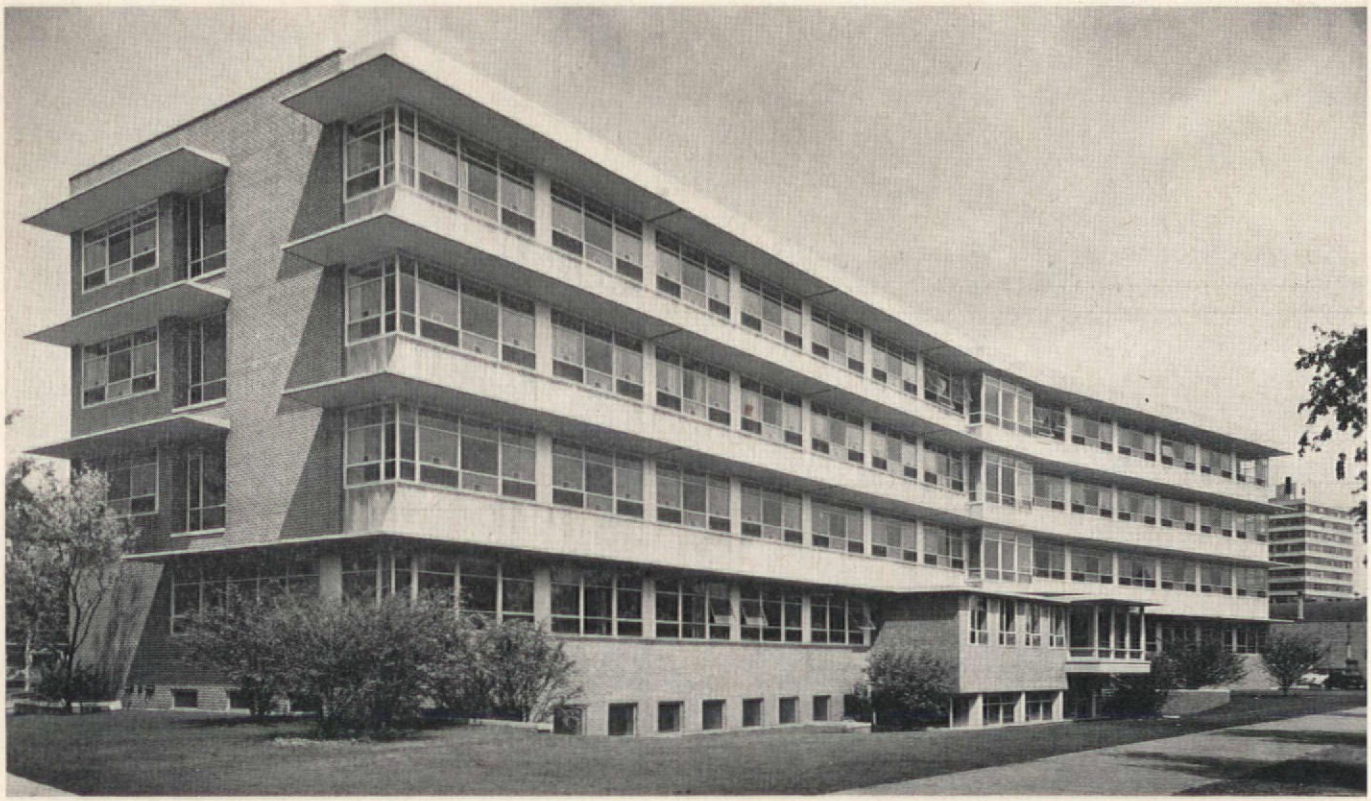
A HOSPITAL with a cheerful look is a rare accomplishment, in spite of frequent comments on its desirability. Here is one in which a non-institutional character was a prime objective of the architects. And while the black-and-white photographs indicate considerable success in this effort, they do not fully convey the results, for gay colors play a strong part in the interiors.

As for the exterior, while the experienced eye may note the obvious form of a large hospital, it would also observe some niceties of treatment which tend to relieve the usual harshness of a hospital. The long horizontals of the sunshades are broken by several projections, and the fenestration suggests the scale of interior spaces. One notes also the bend in the straight lines; this breaks the corridors, to cut in half the long corridor views inside the building. The landscaping also breaks the continuity of the walls, and carries a promise of something other than bleak formality inside the building.

"We have aimed," say the architects, "to lessen patient apprehension of medication and surgery and to hasten recuperation by the elimination of sterile, medical, impersonal atomospheres." Ceilings in corridors and patient rooms are only 8 ft, considerably lower than most hospital standards; they not only cut the cubage of the building, but contribute to a residential scale.

Louis A. Weiss Memorial Hospital, Chicago

Loebl, Schlossman & Bennett,
Architects-Engineers



Chicago Architectural Photographing Co.

Chicago Architectural Photographing Co.

Chicago Architectural Photographing Co

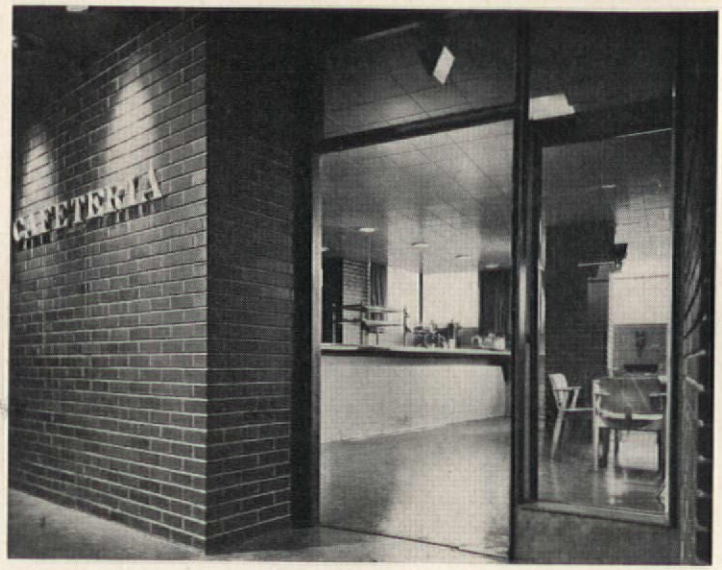
Hedrich-Blessing

Large glass areas at corridor ends admit sunlight and cheer. Colors, materials and furnishings were selected and correlated for warmth, variety and friendliness (interior furnishings by Knoll Associates). Most patient rooms enjoy the view of Lake Michigan. The combination of wall-to-wall windows and projecting canopies give the advantages of view and light without undue brightness or glare. Gay draperies are used for light control.

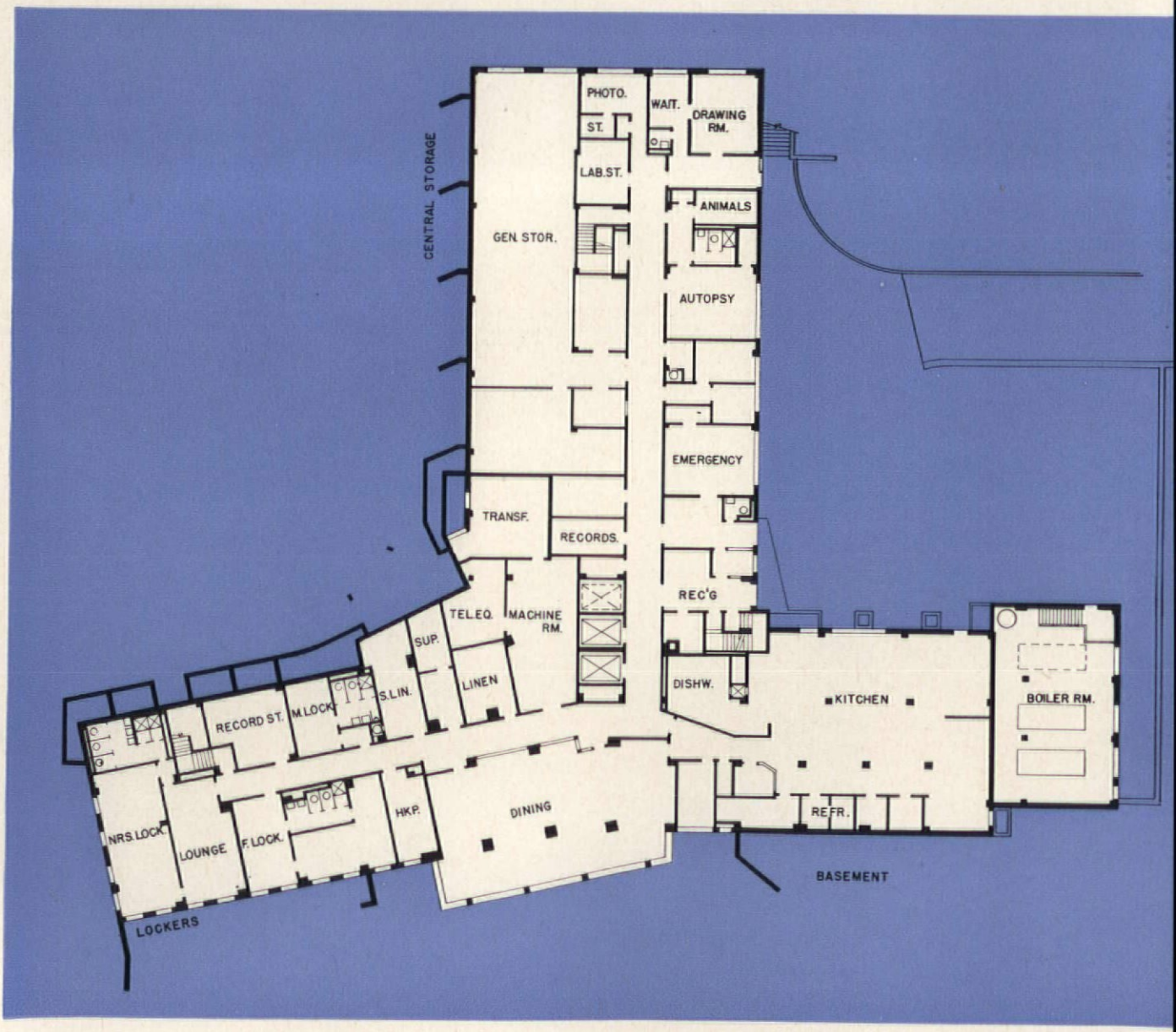
The building can accommodate 108 patients in its present size, though its "chassis" is adequate for an eventual bed capacity of 225. It has no obstetrical or pediatric departments at present; these may be added when the building is extended by the addition of three more floors. It occupies a full block on Marine Drive on Chicago's north side, with an additional half block now used for parking, though this extra plot may later be developed with a doctors' office building. Including all fixed equipment, the building cost approximately $3,000,000, exclusive of land, landscaping and professional fees.

Interiors generally were planned to obviate the usual institutional character of a hospital. Nurses' station (below) is opposite elevators at center of the bent top of the T, commanding views of corridors in both directions. View at bottom of page shows combination doctors' lounge library and conference room, on first floor

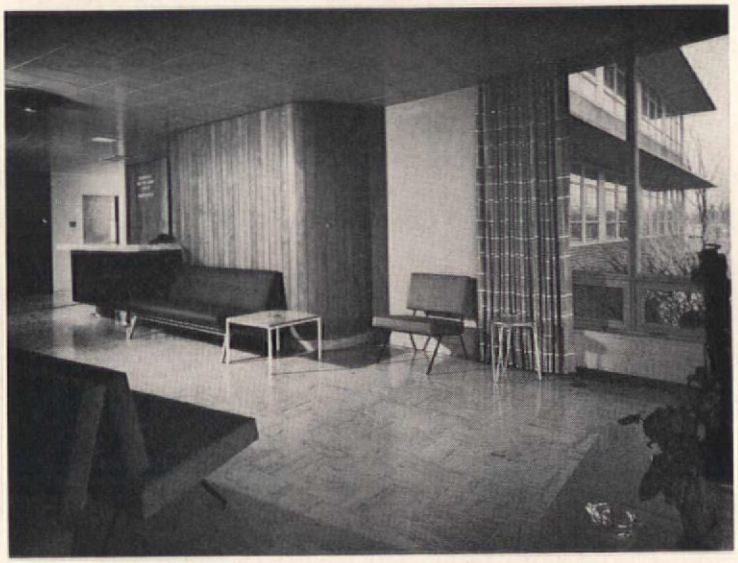
Hedrich-Blessing

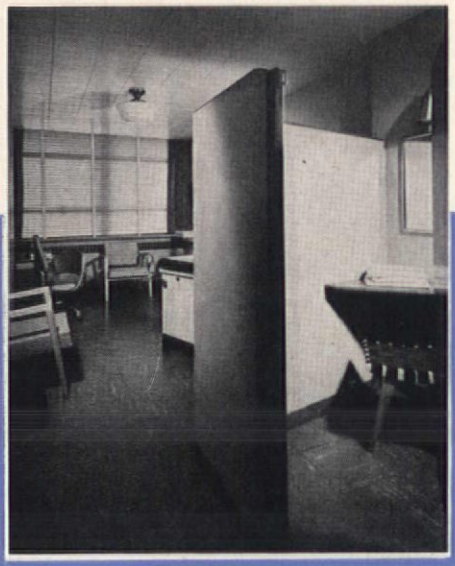


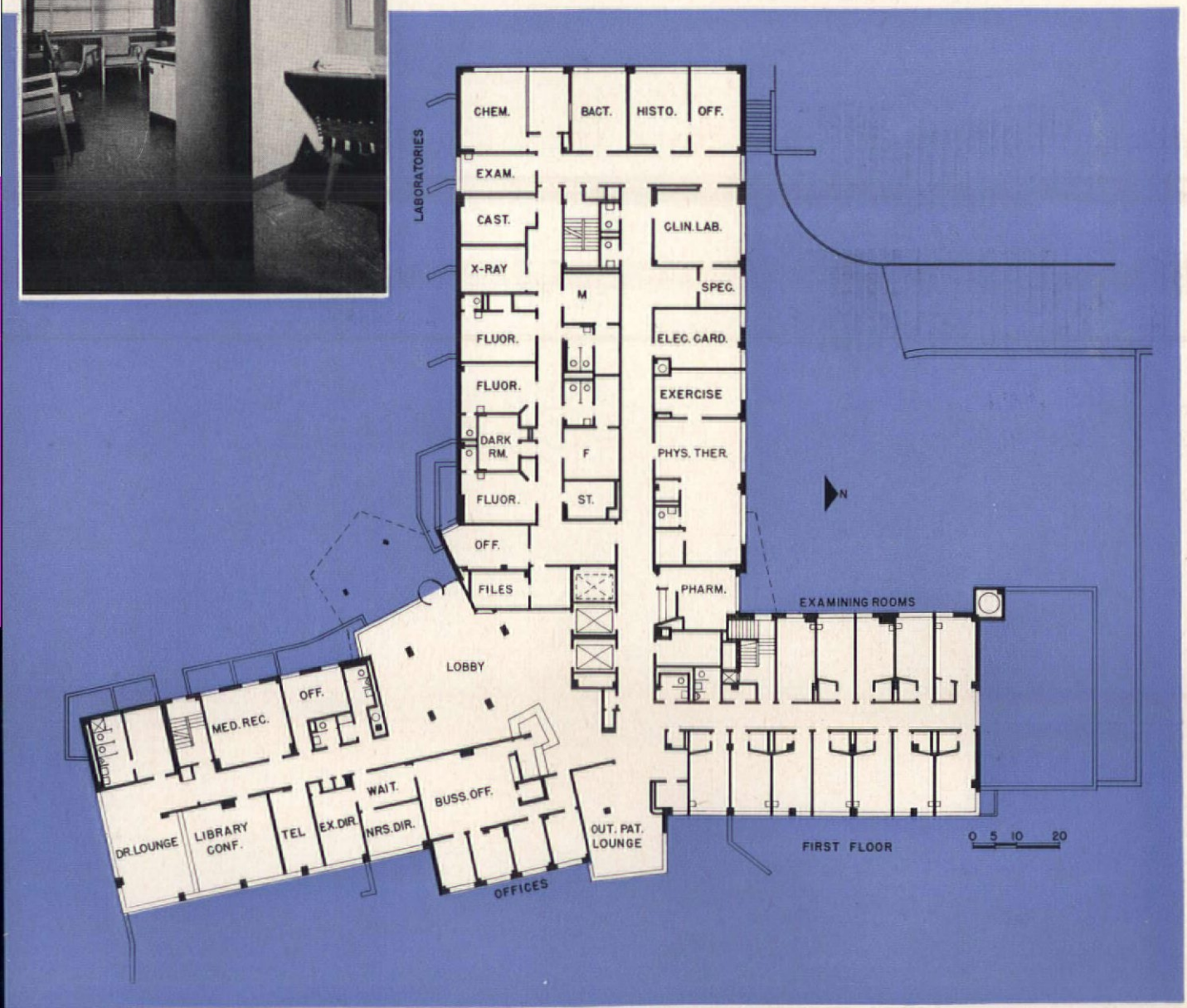
Hedrich-Blessing



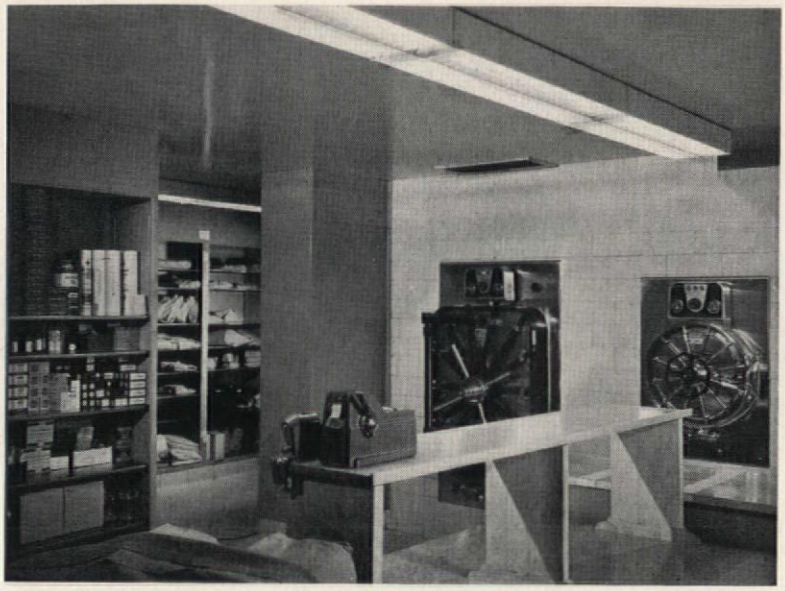
Patient food service is by individual tray from main kitchen; trays come off conveyor belt, 10 at a time, go via trucks directly to elevator; total time to patient, 5 minutes. Hospital has large outpatient department, with a dozen examining rooms (below) and separate outpatients' lobby (right) next to laboratory, X-ray, therapy departments

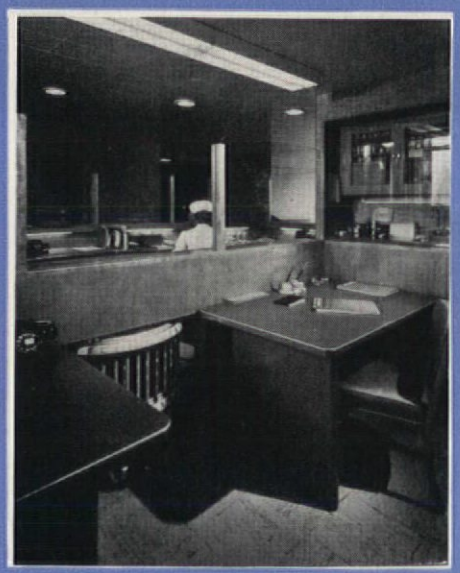


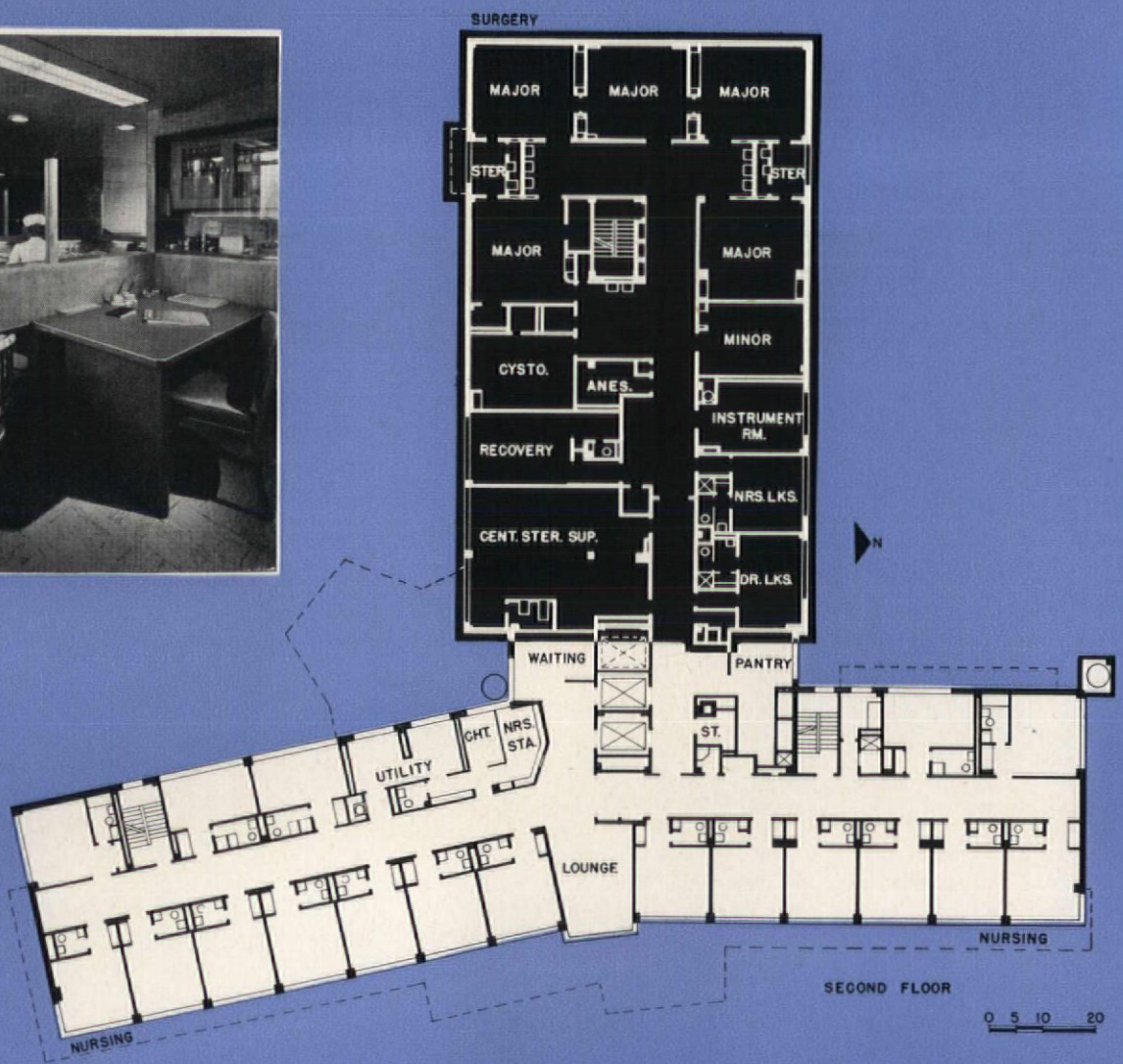


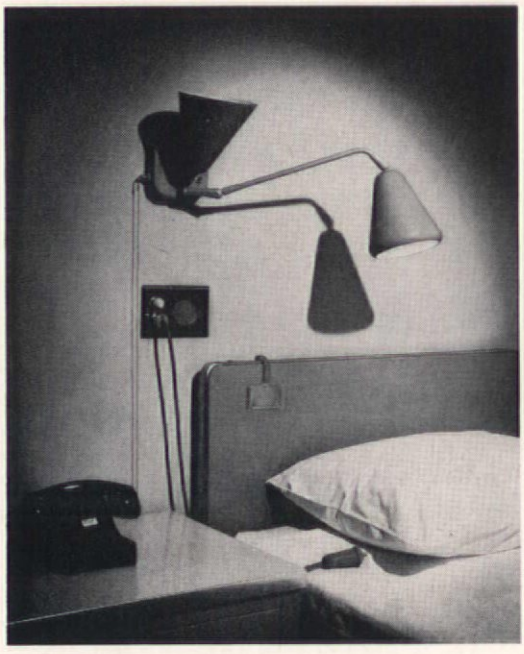


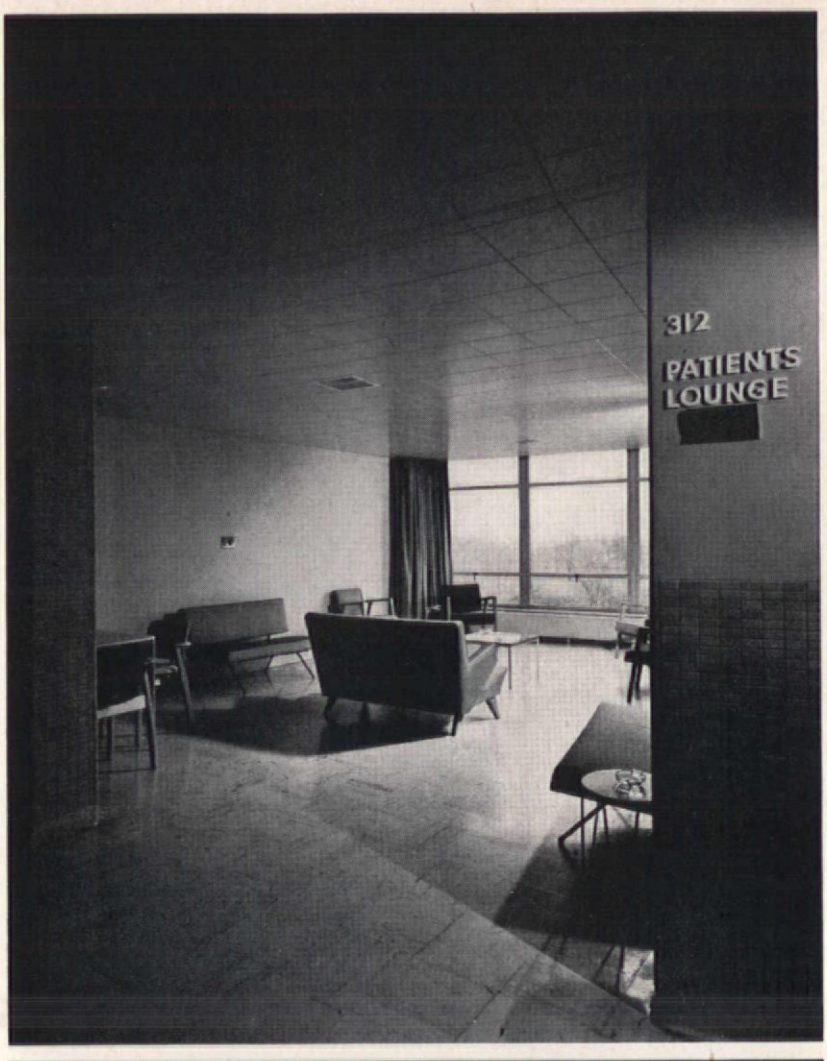
Hedrich-Blessing

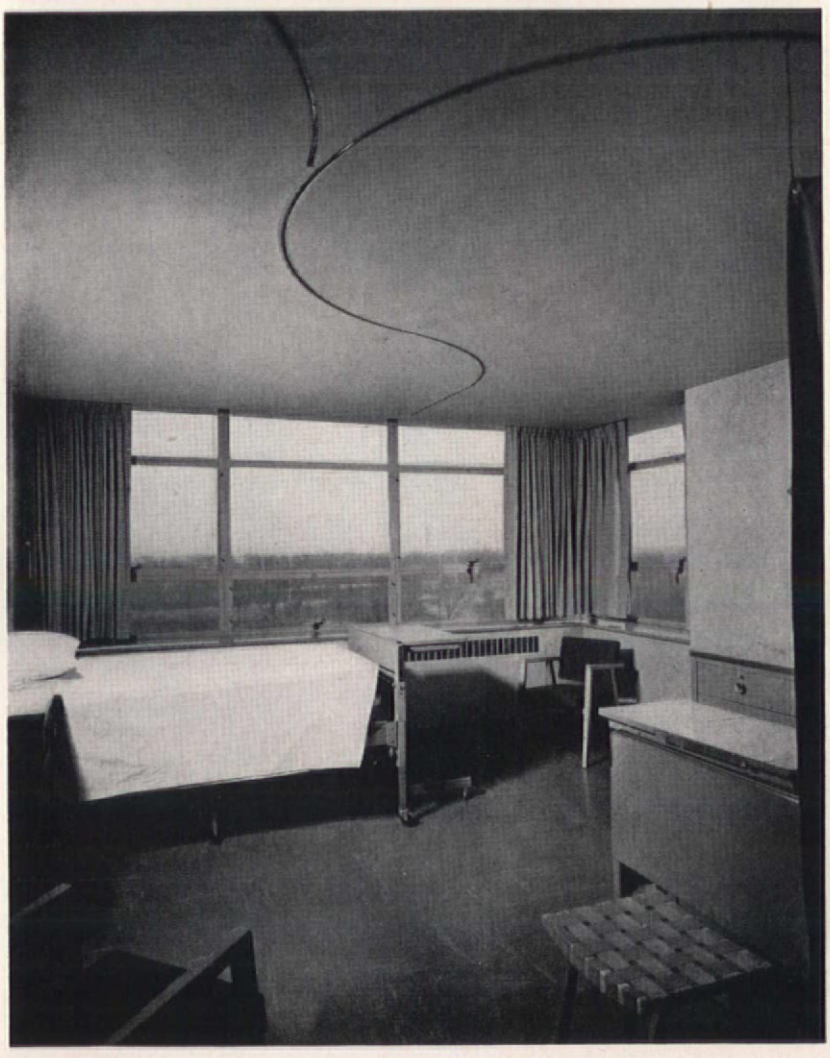








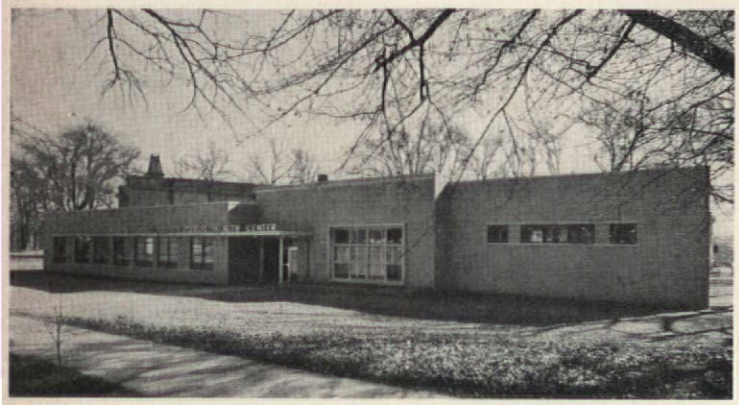




Virtually all patient rooms have two beds, mainly for economy reasons. But all beds parallel windows, so that both patients have equal advantages of light, view, air. Curtain tracks in curvilinear forms permit curtains to be arranged so that nurses or visitors have access to either bed without traversing other patient's area. This arrangement means more wall space than conventional rooms, also some duplication of call systems and oxygen outlets, but was considered here to be worth the difference, especially since there really are no single rooms in the whole hospital

PUBLIC HEALTH CENTER FOR A RURAL AREA

Athens-Clarke County Health Center, Athens, Ga.



Heery and Heery, Architects

H. K. Nicholson, Engineer associated

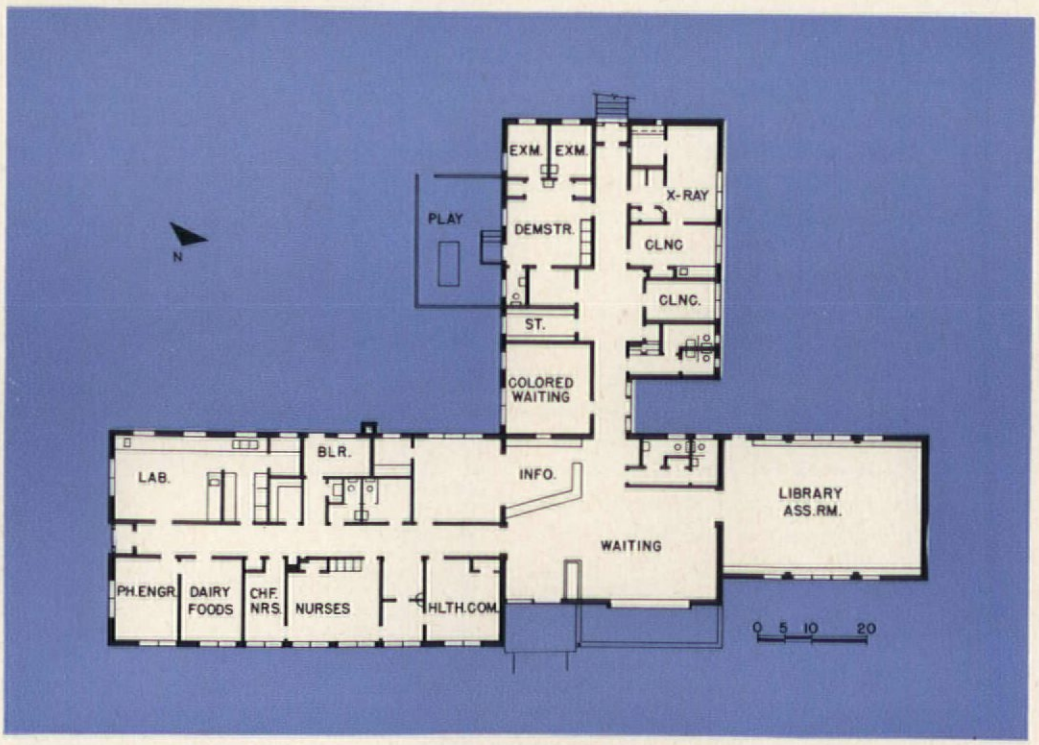
J. W. Austin Jr., Mechanical Engineer

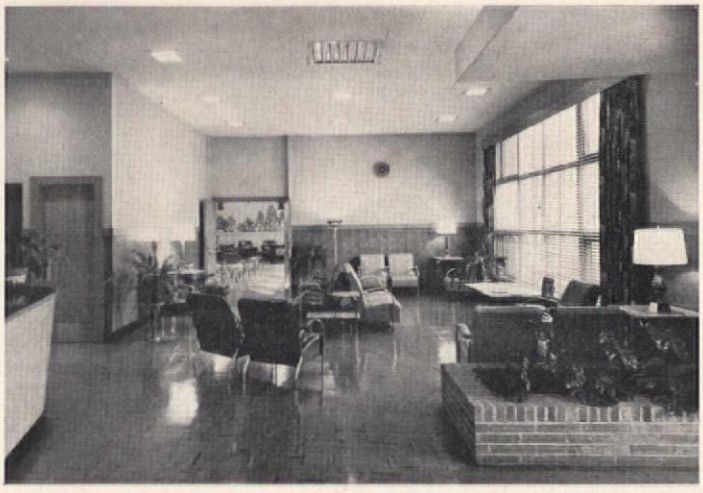
William Leroy Edwards, Electrical Engineer

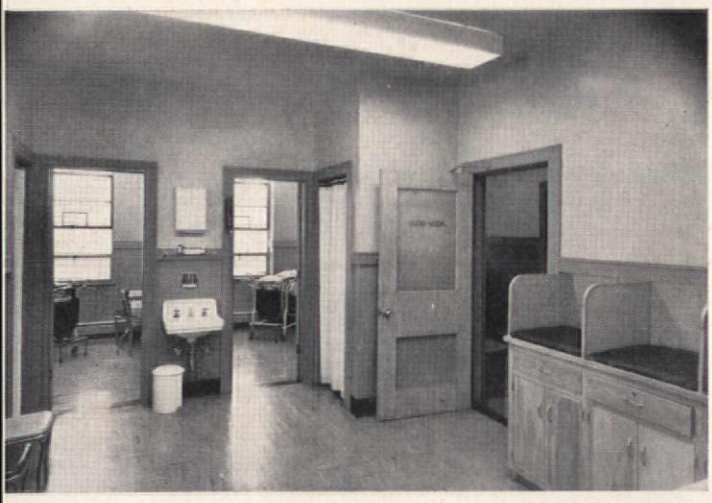
THE SOUTH has seen a great many health centers spring up under the federal program of extending health facilities to areas where the need has been great. This was one of the earlier ones to be completed, and is fairly representative of the accommodations provided for the nursing staff and laboratory technicians and doctors who not only guard the community against contamination and epidemic diseases, but also train citizens, especially mothers, in matters of health.

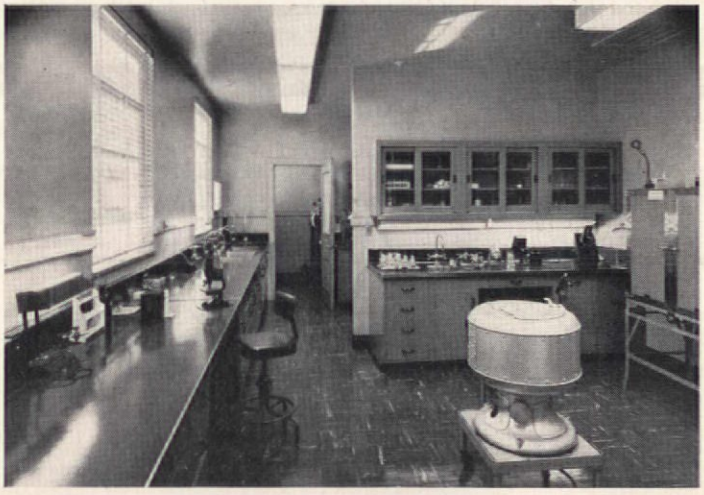
The plan divided logically into two main wings, one for clinical services, one for public health workers. The assembly room is placed so that it can be used for lectures and demonstrations without disturbing the operations in other parts of the building.

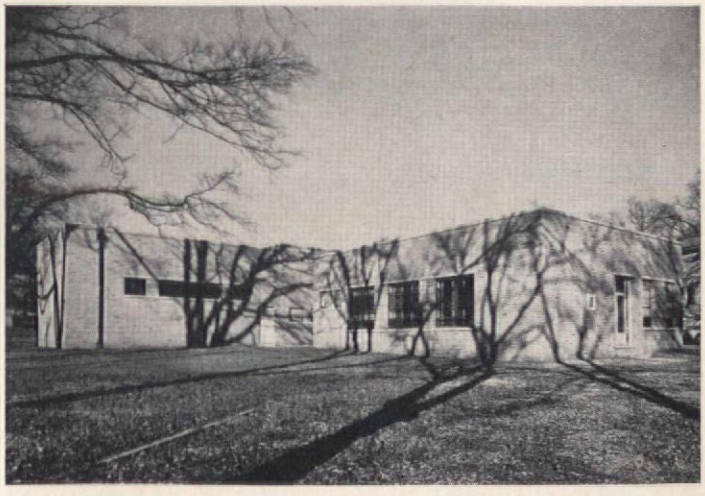
The building is of ordinary construction, with masonry bearing walls, concrete floor on ground, wood partitions and roof construction. Heating is gas fired, radiant hot water, with wrought iron coils in the floor.







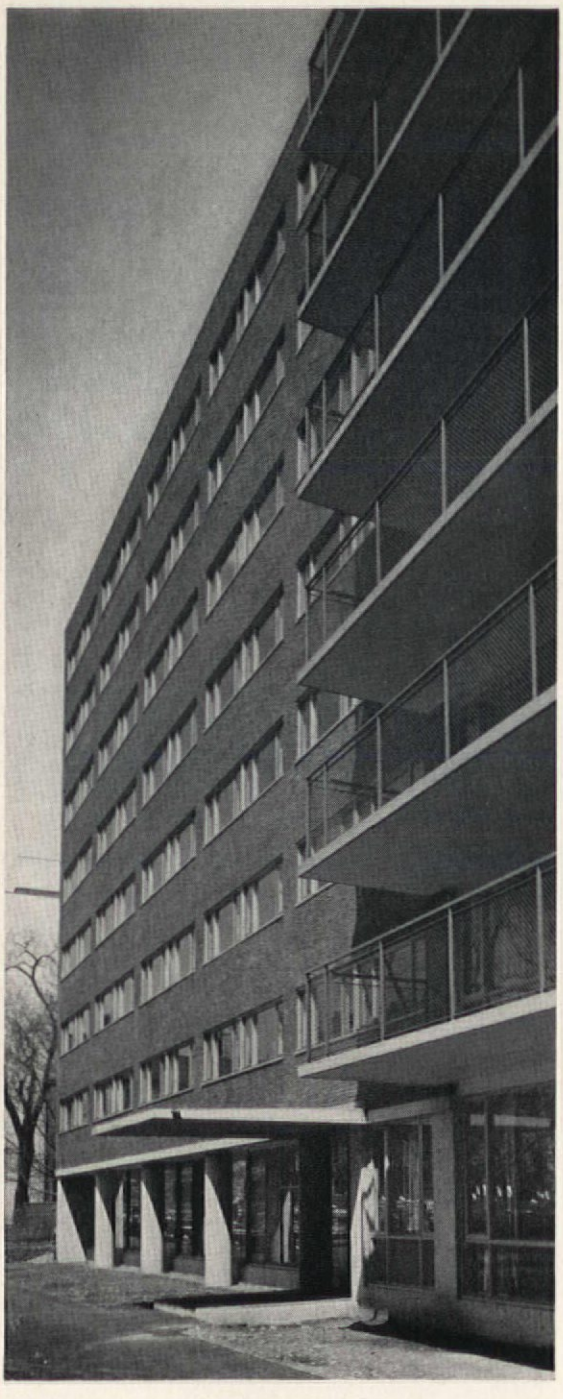




NURSES' HOME ATTRACTS VITAL PERSONNEL

Nurses' Home, Massachusetts General Hospital, Boston

Shepley, Bulfinch, Richardson & Abbott, Architects

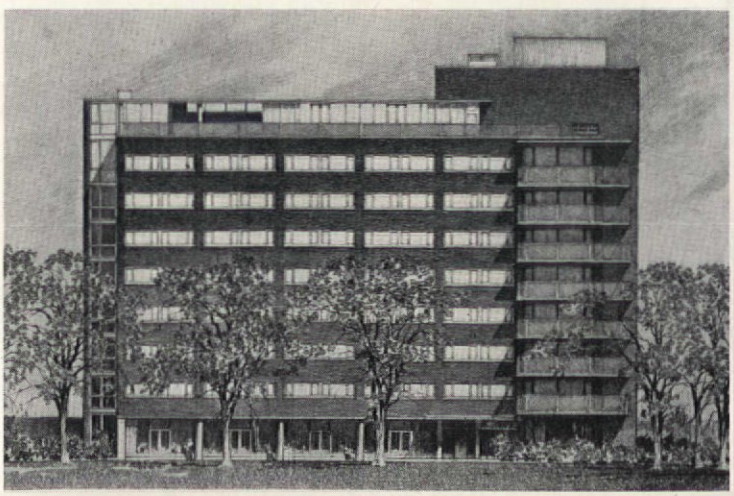


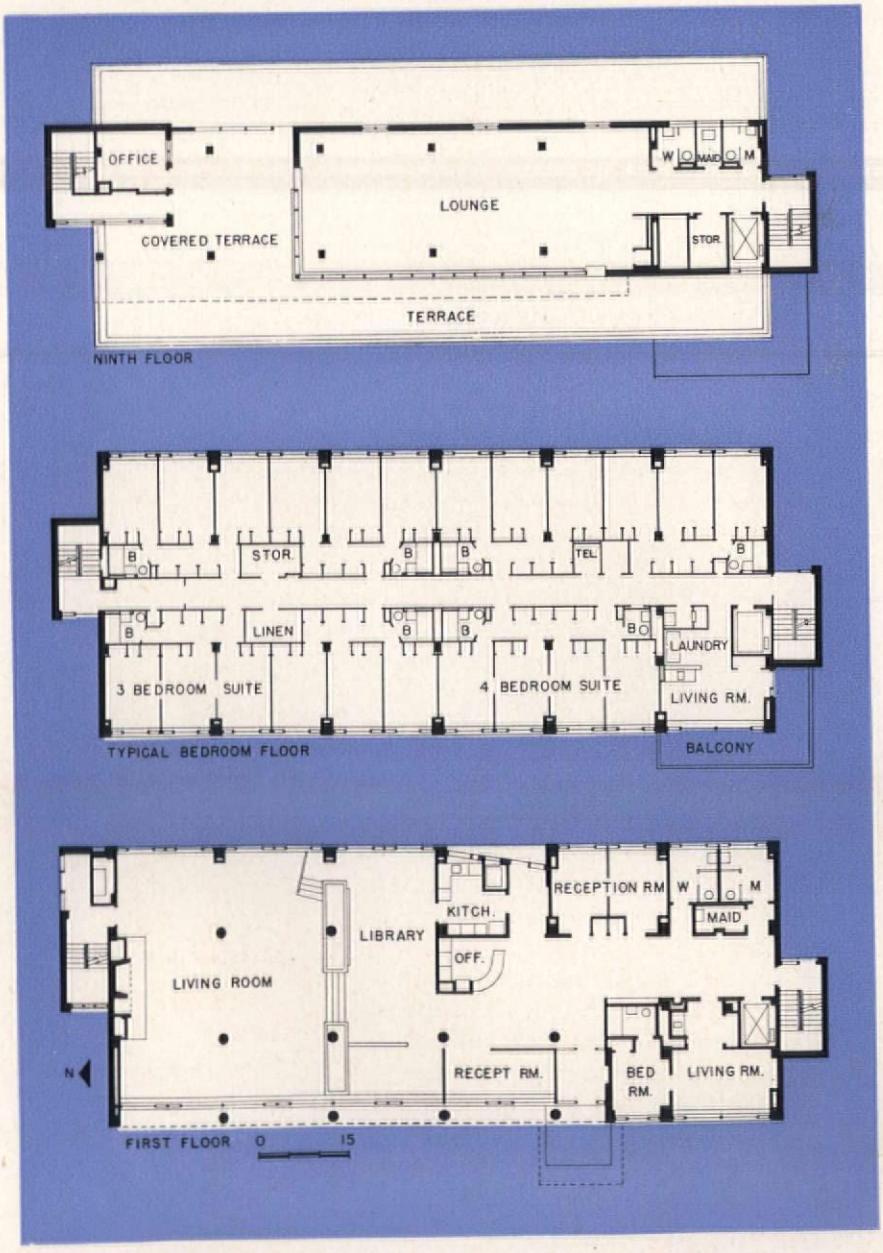
Robert D. Harvey Studio

NURSES' HOMES are a recognized part of the Hill-Burton program, as frequently the nursing situation determines the whole hospital operation. This is an exceptionally nice one, with pleasant but economical accommodations.

The problem was to house as many nurses as possible within the allotted budget. The rooms were organized in suites of three for student nurses and in suites of two bedrooms and one sitting room for graduates, the arrangements being interchangeable. All suites were equipped with private bath accessible. Basement contains a trunk room along with various services. Mr. Shepley comments that the three-room suites have worked out very well indeed and are very popular with the nurses. They like especially the extra closets in the sub-corridors. The small living room on each floor has also proved successful; in the early stages of planning there was a living room on each floor which took the equal of two bedrooms, also a tea kitchen and a small laundry. For the sake of economy these were combined together and a balcony was added.

The cost, exclusive of landscaping and fees, was $786,542. This comes to $1.86 per cu ft, or $5975 per nurse accommodated.




OFFICE
COVERED TERRACE
LOUNGE
TERRACE
STOR
W
MAID
M
NINTH FLOOR
B
STOR.
TEL.
LINEN
LAUNDRY
3 BEDROOM SUITE
4 BEDROOM SUITE
LIVING RM.
BALCONY
TYPICAL BEDROOM FLOOR
LIVING ROOM
LIBRARY
KITCH.
OFF.
RECEPTION RM
MAID
RECEPT RM.
BED RM.
LIVING RM.
N
FIRST FLOOR
0
15

LABORATORY FOR STATE HEALTH DEPARTMENT

Hygienic Laboratory Building for West Virginia Department of Health, Charleston, W. Va.

HEALTH LABORATORIES are an important part of the health program under Hill-Burton, but actually not many projects in this category have been completed. Perhaps a brief record of this project will serve to illustrate both the need and the difficulties involved.

The hygienic laboratory of the State of West Virginia has been plagued for years by inadequate housing, renting quarters in five different buildings. Many attempts were made to get the several departments together — the state water commission, health department and its industrial hygiene bureau, and the sanitary engineering division. In the end the funds were forthcoming only for the state health department, involving some $500,000 of state and federal funds. This building, then, houses only the hygienic laboratory division of the health department.

The problem then was to plan a building of functional design, with the highly specialized and varied facilities necessary for exacting bacteriological, immunological and chemical routine and research work, with adequate protection against laboratory-acquired infections among workers. Along with the usual requirements of a building, were: sanitary finishes of interior surfaces, for ready washability, maximum dust prevention, safety venting from infected areas, means for area asepsis, exceptionally good lighting.

The architects and the laboratory personnel worked together on layout sketches, and the final plans incorporate the basic principles of the model plans for state health laboratories of the Committee on Laboratory Quarters of the Conference of State and Provincial Public Health Laboratory Directors. A one-story scheme was adopted as most suitable for flow of work. Maximum flexibility was achieved by the use of movable steel partitions wherever possible, and the building was planned for later extensions if needed.

The building has brick load-bearing walls, with 2-in. concrete slab roof construction on bar joists. Interior of outside wall is finished with clear-glazed facing tile; this finish is also used for solid partition walls in areas for refrigeration, sterilization, shipping, also locker and toilet rooms. Floors are largely asphalt tile, though ceramic tile is used in service areas. Ceilings are of acoustic tile.

The building was planned for central air conditioning, using corridor as return plenum. Certain of the laboratory rooms were planned for 100 per cent make-up air, to prevent virus infections from reaching other rooms. As yet, however, the budget has not extended to the air conditioning equipment.

C E. Silling & Associates, Architects

John Paul Jones, Cary and Millar, Mechanical and Electrical Engineers

R. W. Haworth, Structural Engineer

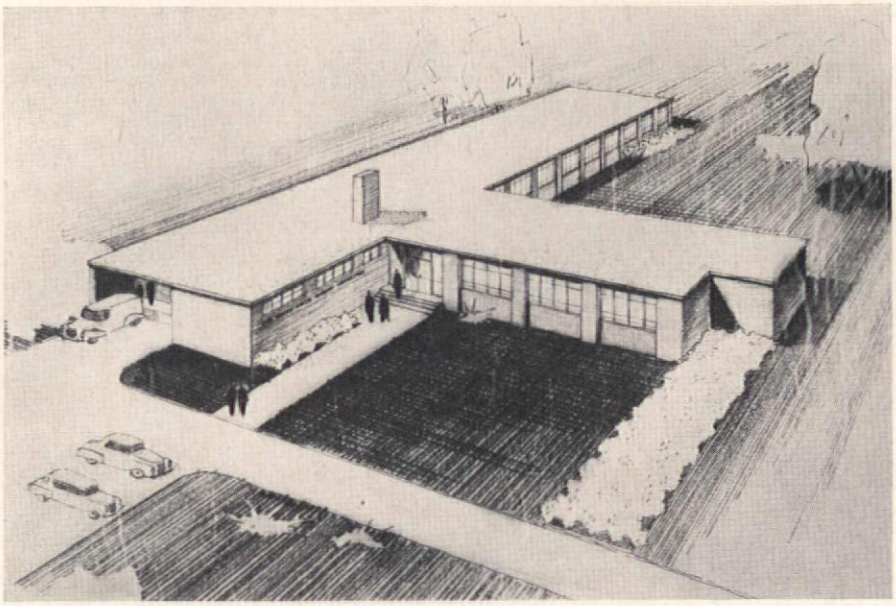
COST DATA

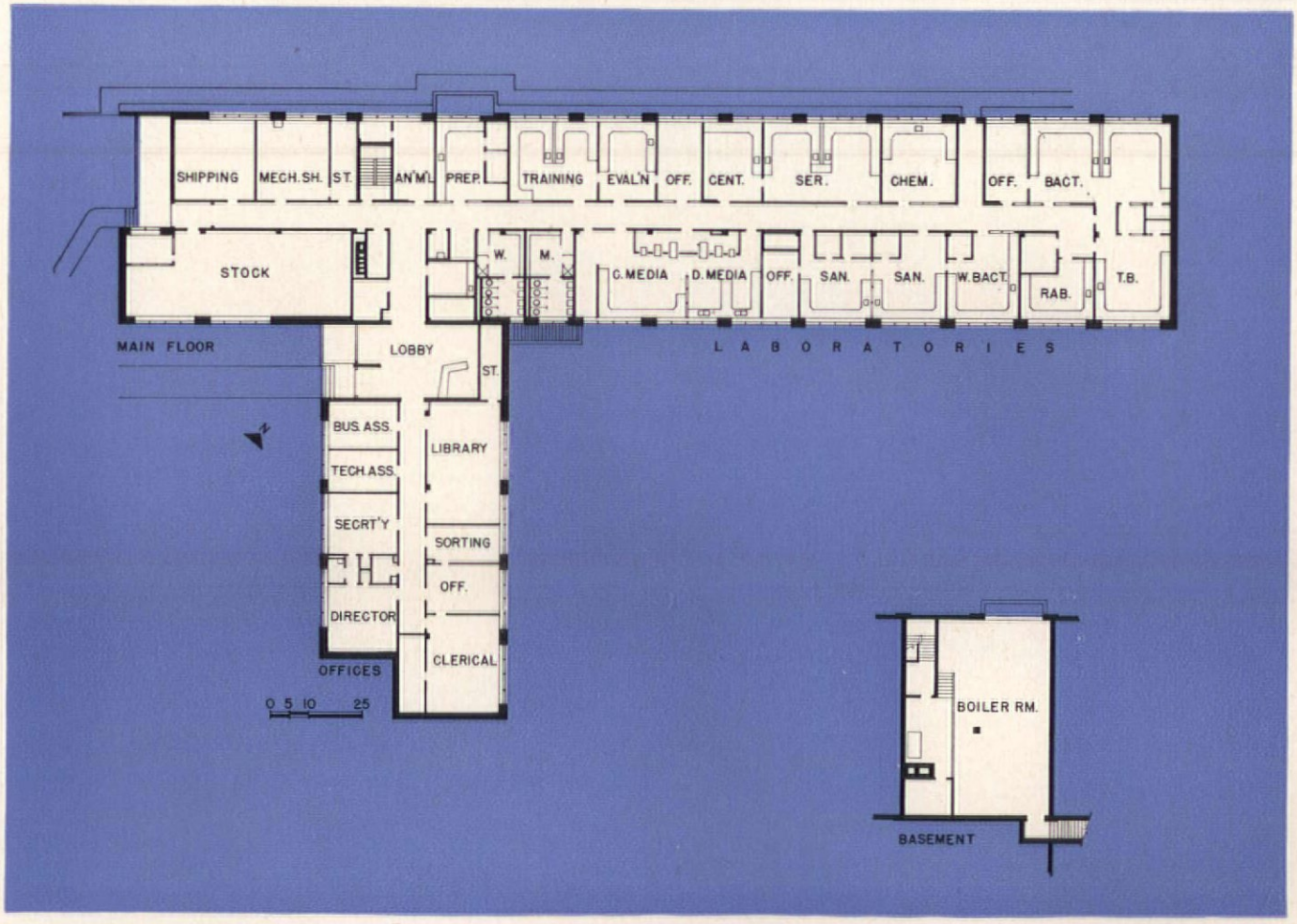
Date of Contract—Feb. 18, 1953

Total Construction costs		$462,000
Total Laboratory Furnishings		52,560
Total Cubage	406,760 cu ft	
Total square feet	23,298 sq ft	
Construction cost per cu ft		$1.1358
Furnishing cost per cu ft		.129
	Total	$1.2648

General Construction	Total Cost	Cu ft Cost
General Construction	$327,541	$.8052
Heating, Plumbing, Ventilating	95,868	.2356
Electrical	38,591	.0948
Totals	$462,000	$1.1356

Architects' fees and loose equipment costs not included in above. Also an item of $35,000 for air conditioning equipment not yet installed will eventually be added to above costs.



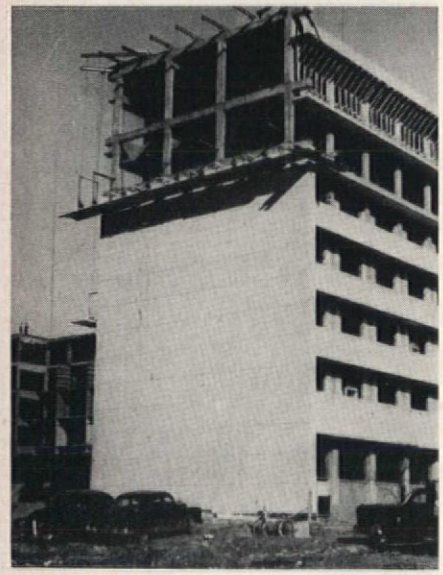

SHIPPING
MECH. SH.
ST.
AN'M'L
PREP.
TRAINING
EVAL'N
OFF.
CENT.
SER.
CHEM.
OFF.
BACT.
STOCK
W.
M.
C. MEDIA
D. MEDIA
OFF.
SAN.
SAN.
W. BACT.
RAB.
T.B.
MAIN FLOOR
LOBBY
ST.
L A B O R A T O R I E S
BUS. ASS.
TECH. ASS.
SECRT'Y
DIRECTOR
OFFICES
LIBRARY
SORTING
OFF.
CLERICAL
0 5 10 25
BOILER RM.
BASEMENT

MEDICAL SCHOOL AND TEACHING HOSPITAL

University Medical School and Teaching Hospital, Jackson, Miss.

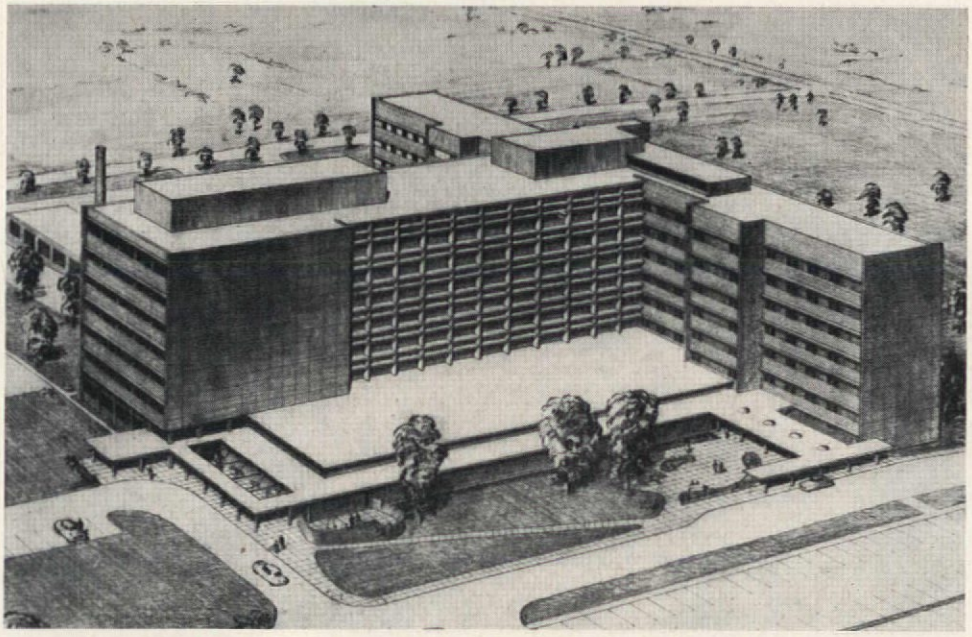
MNO Associated Architects

E. L. Mulvaney
R. W. Naef
N. W. Overstreet



WHILE THE HILL-BURTON PROGRAM gives major attention to small hospitals for rural areas, it also contemplates that teaching and training are vital to the extension of the country's health facilities. Thus the Coordinated Hospital System points toward the teaching hospital as the top level of medical science. Here, then, is one of the few large new institutions, to fill a great need in the developing South.

As a planning assignment it was a major study in schematics, with three architectural firms uniting to handle one of the most complicated tasks of recent years. Developing the program took about six months, the schematics another four months. From these preliminaries a model was built, for study of the building that would result. At this point an interesting story begins. The architects, solemnly viewing the model,



agreed that they were unhappy. They concluded further that everybody was too close to the functions of the project to make an unbiased study of the mass. They then called in an outside architect, W. R. Allen, Jr., to contribute a fresh viewpoint. He went to Jackson to study the organization of the building with a view to simplification, and offered a new scheme in sketch renderings. The principals decided that much of his detail would strain the cost budget — which also had been watched closely — but that his overall scheme was acceptable. It involved considerable reshuffling in plan, but it did improve the mass. They concluded then that the whole experience had been quite salutary, for it had helped them out of a planning rut. From then on the thinking was clarified and the present schematics quickly followed.

A. C. Bachmeyer, M.D., Medical Consultant

Gardner & Howe associated with Post & Witty, Structural Engineers

Landauer & Shaffer, Mechanical and Electrical Engineers

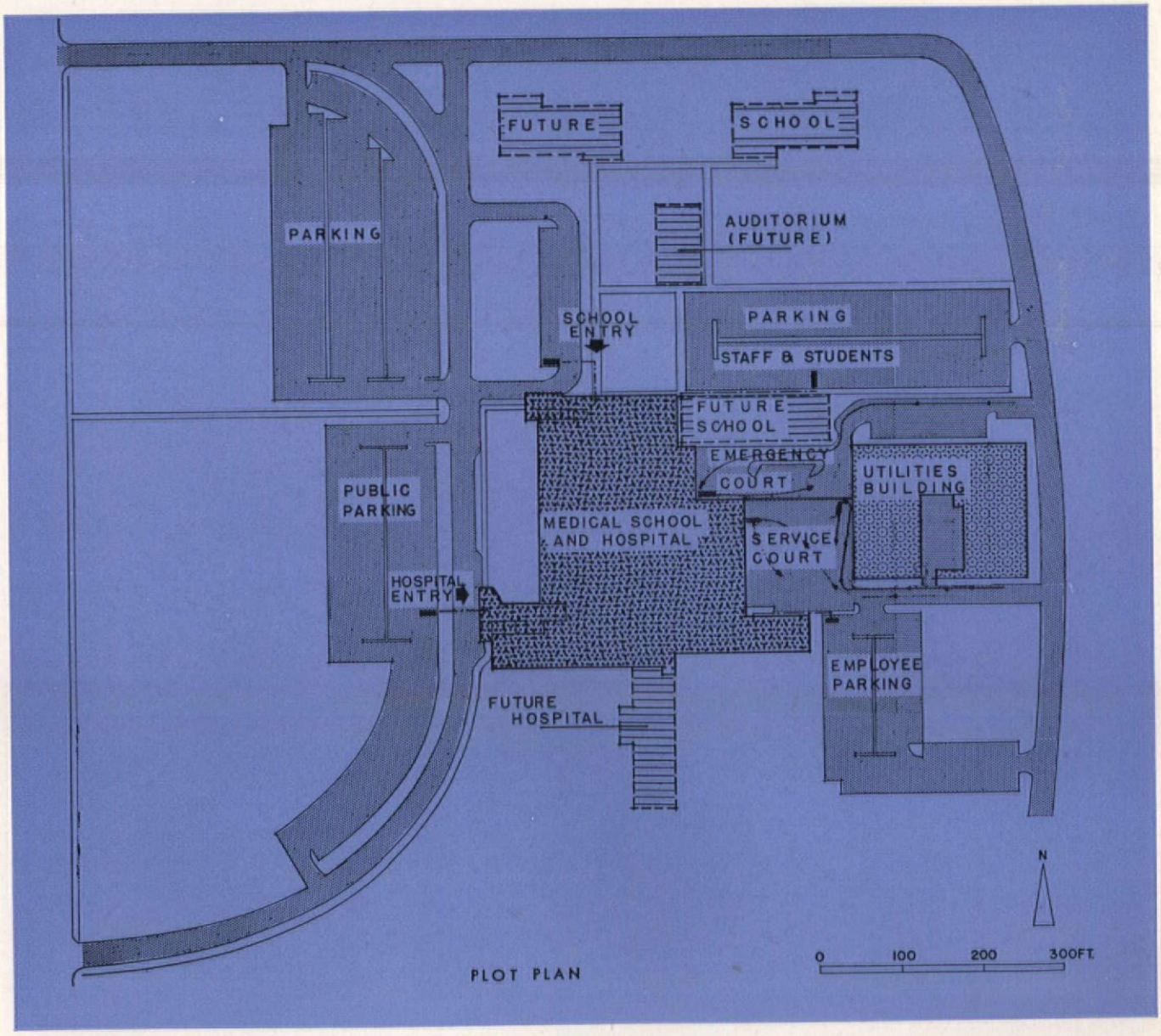
Olmstead Brothers, Site Planners

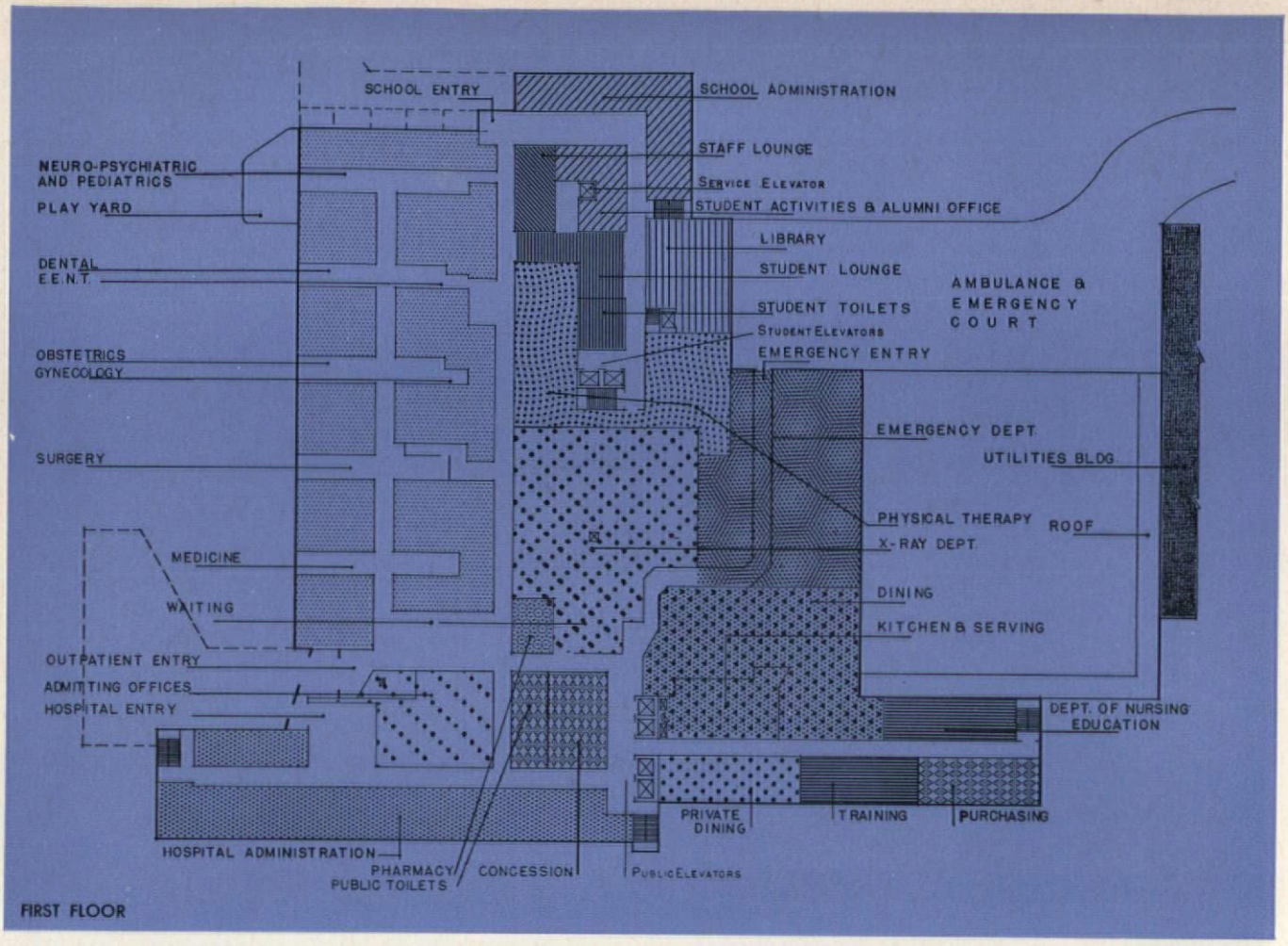
The schematics, presented on following pages, have been analyzed exhaustively, and will bear as close scrutiny as one may care to give them. To relate all of the program and the reasoning in it would require a prodigious presentation; a few highlights will have to suffice.

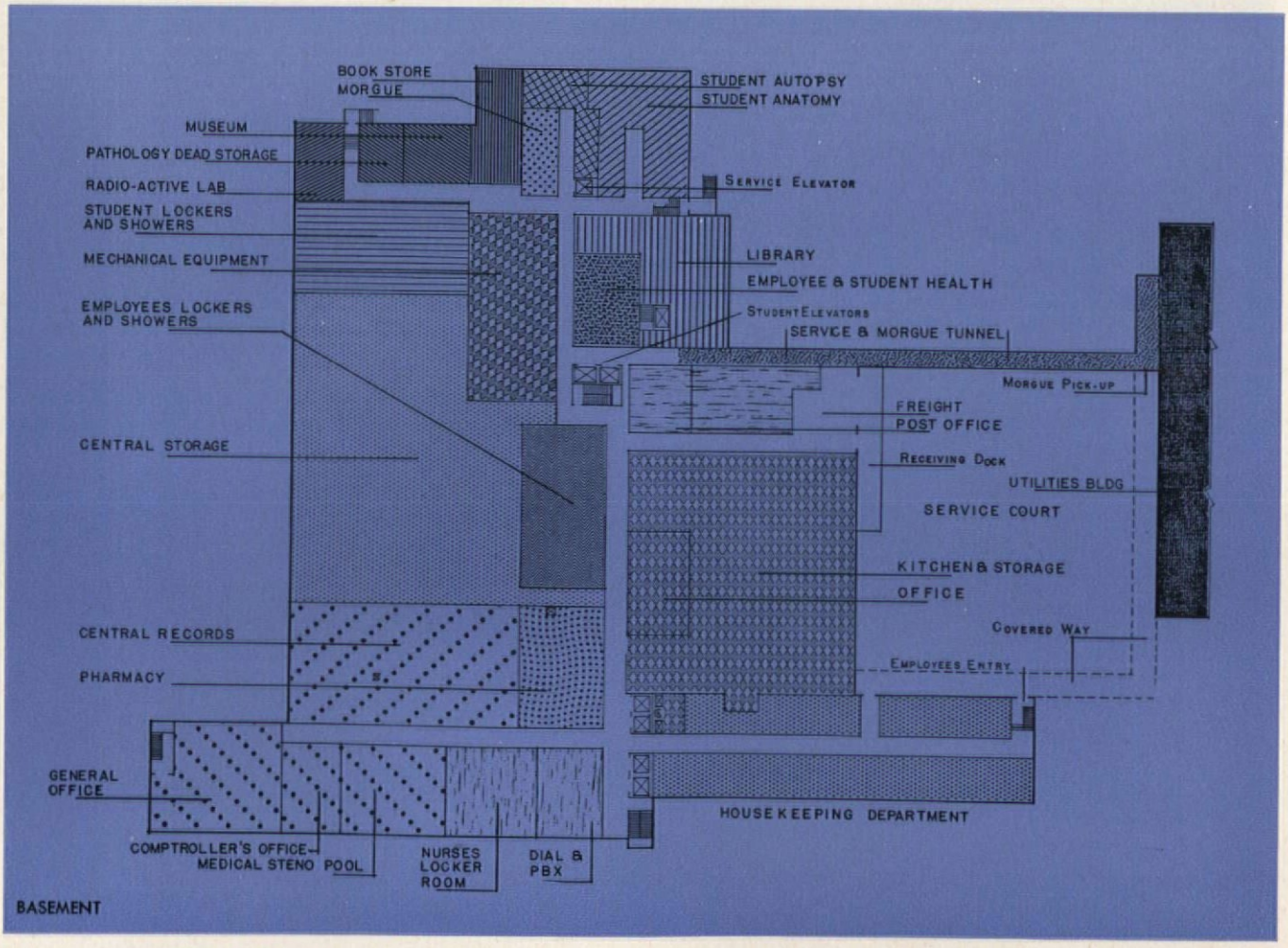
The diagrams clearly show the dual purpose of school and hospital, the bottom of the T form providing, on each floor, an isolated location for laboratories and lecture rooms. The T shape proves useful, too, for keeping two nursing units per floor separated from each other and from medical and surgical departments. The double corridor device is cleverly used to maintain separations of functions and keep the travel distances within bounds.

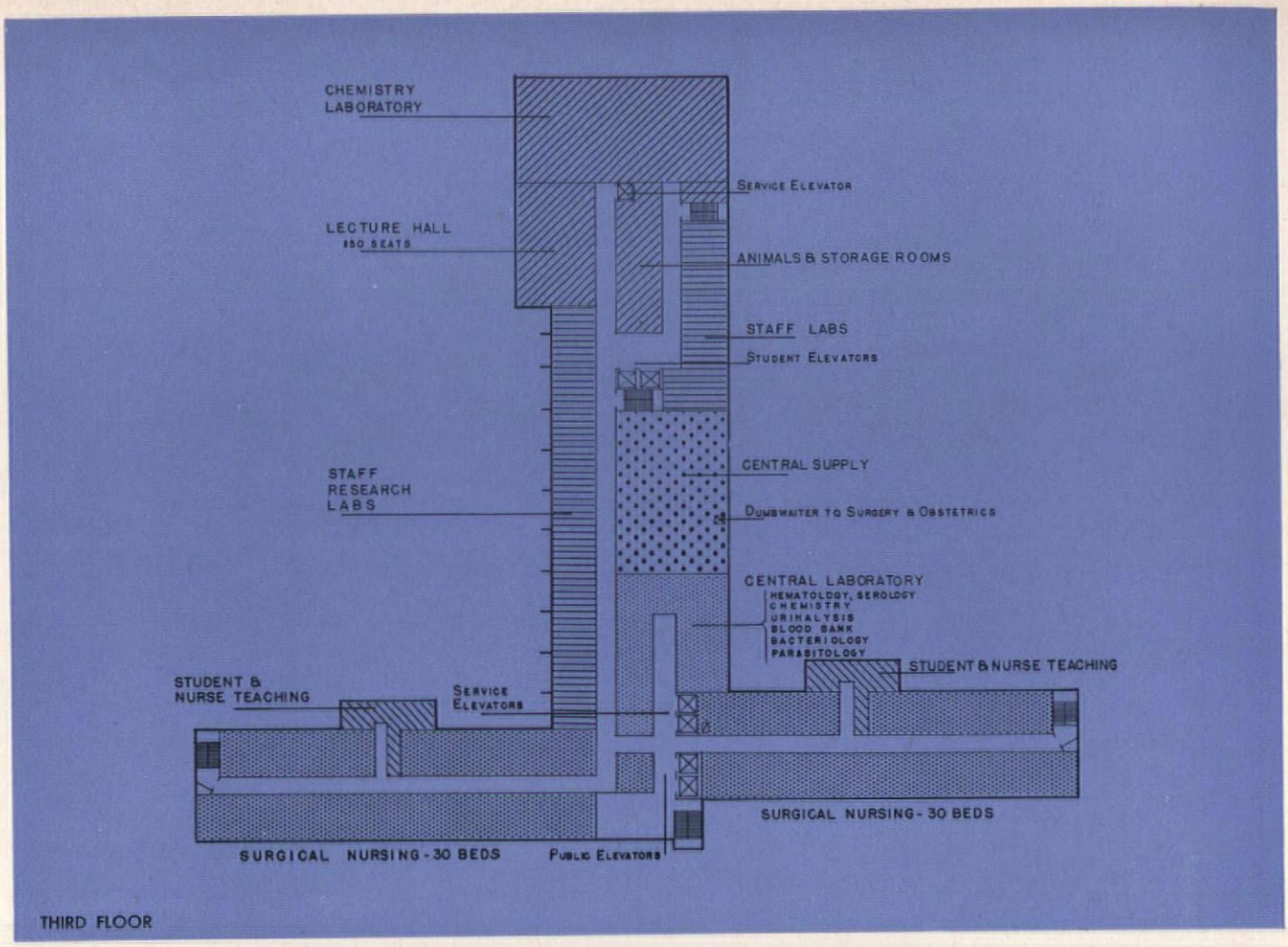
The first floor development, with huge outpatient department, called for shoehorn operations on a vast scale. Note especially the scheme for clinical departments, with cross corridors; this space will have clerestory windows.

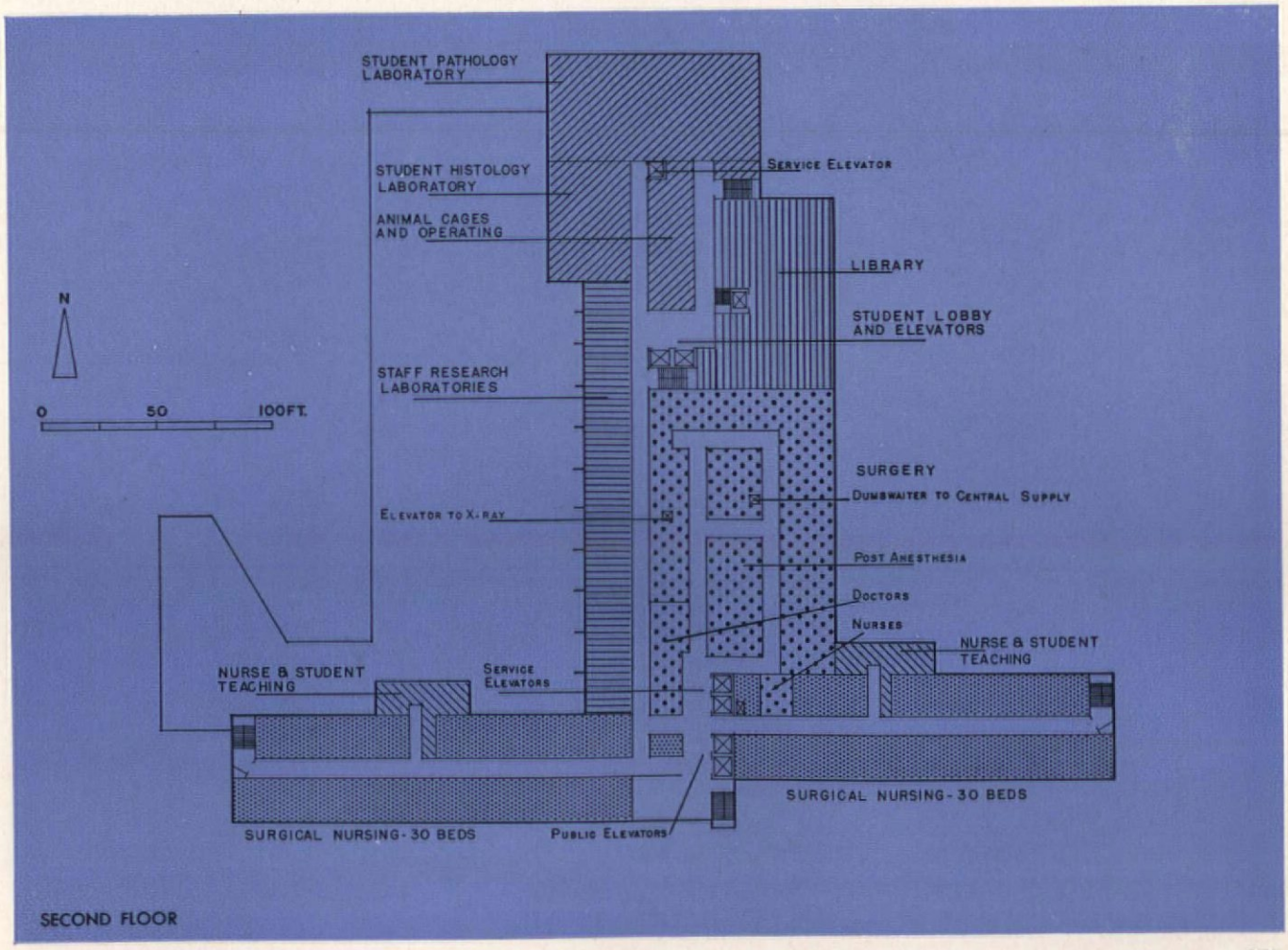
The building is scheduled for completion early in 1955, and will cost approximately $9,000,000.

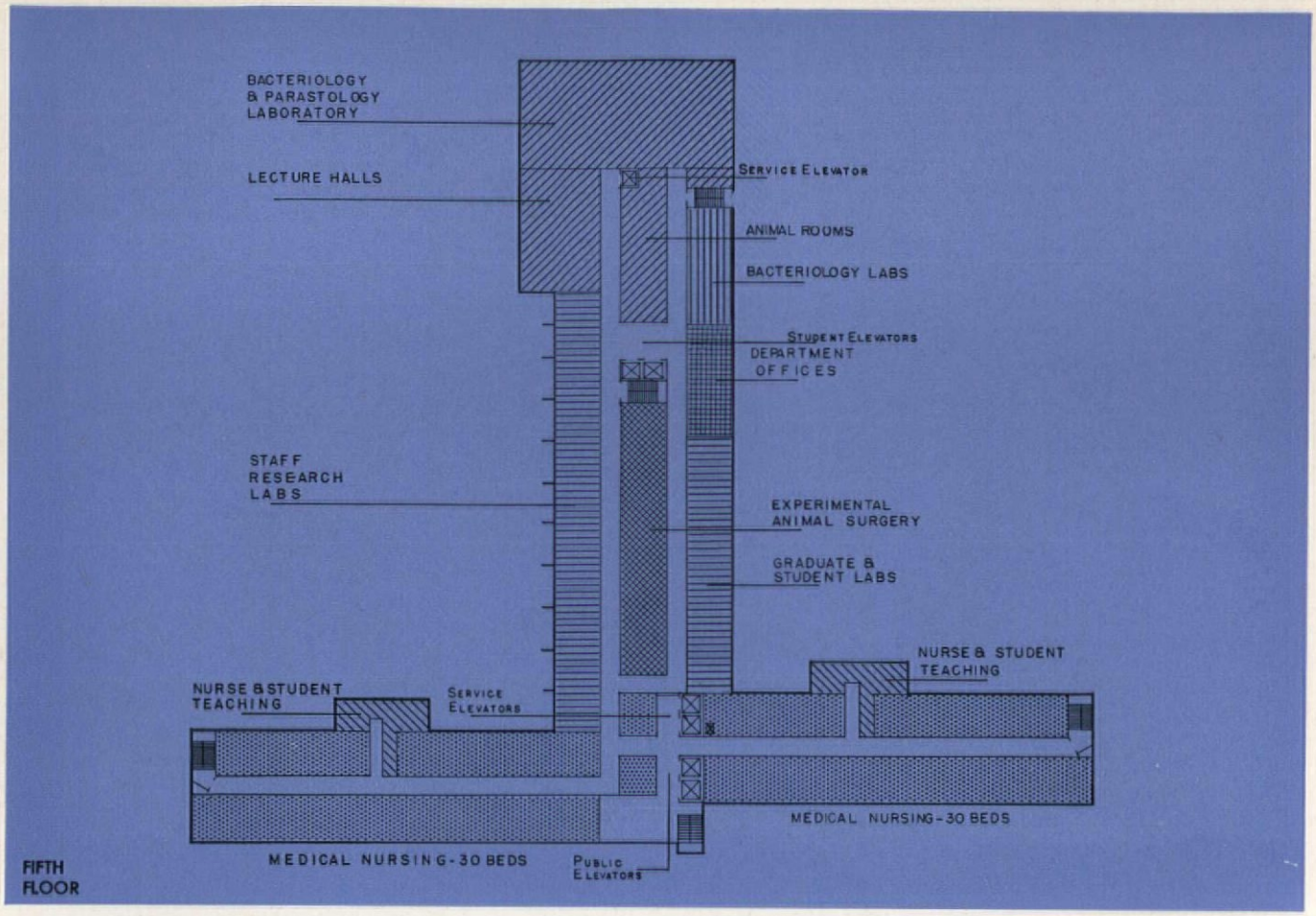


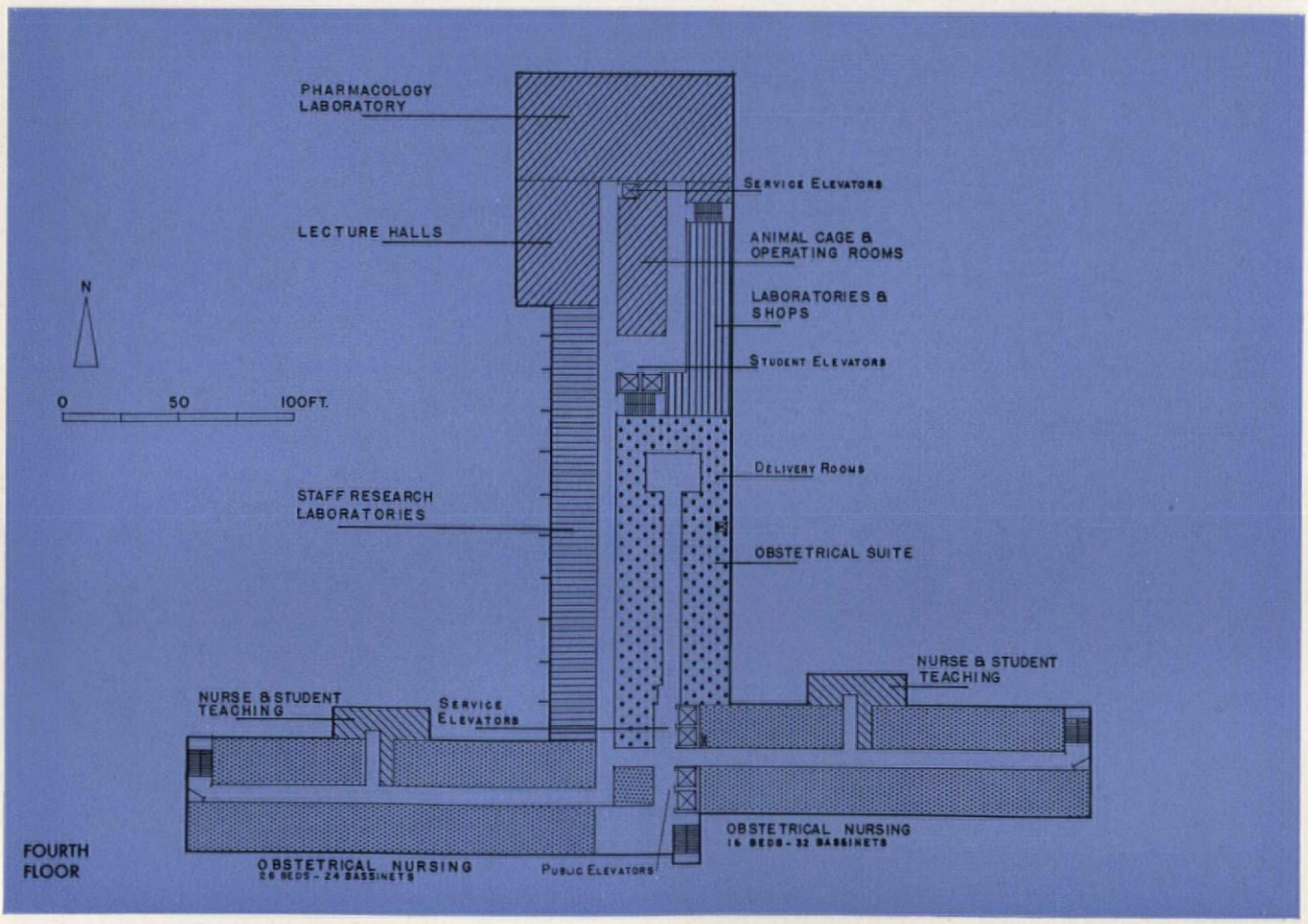

SCHOOL ENTRY
SCHOOL ADMINISTRATION
STAFF LOUNGE
SERVICE ELEVATOR
STUDENT ACTIVITIES & ALUMNI OFFICE
NEURO-PSYCHIATRIC AND PEDIATRICS
PLAY YARD
DENTAL
E.E.N.T.
LIBRARY
STUDENT LOUNGE
AMBULANCE & EMERGENCY COURT
STUDENT TOILETS
STUDENT ELEVATORS
EMERGENCY ENTRY
OBSTETRICS
GYNECOLOGY
EMERGENCY DEPT.
UTILITIES BLDG.
SURGERY
PHYSICAL THERAPY
ROOF
X-RAY DEPT.
MEDICINE
DINING
WAITING
KITCHEN & SERVING
OUTPATIENT ENTRY
ADMITTING OFFICES
HOSPITAL ENTRY
DEPT. OF NURSING EDUCATION
PRIVATE DINING
TRAINING
PURCHASING
HOSPITAL ADMINISTRATION
PHARMACY
PUBLIC TOILETS
CONCESSION
PUBLIC ELEVATORS
FIRST FLOOR

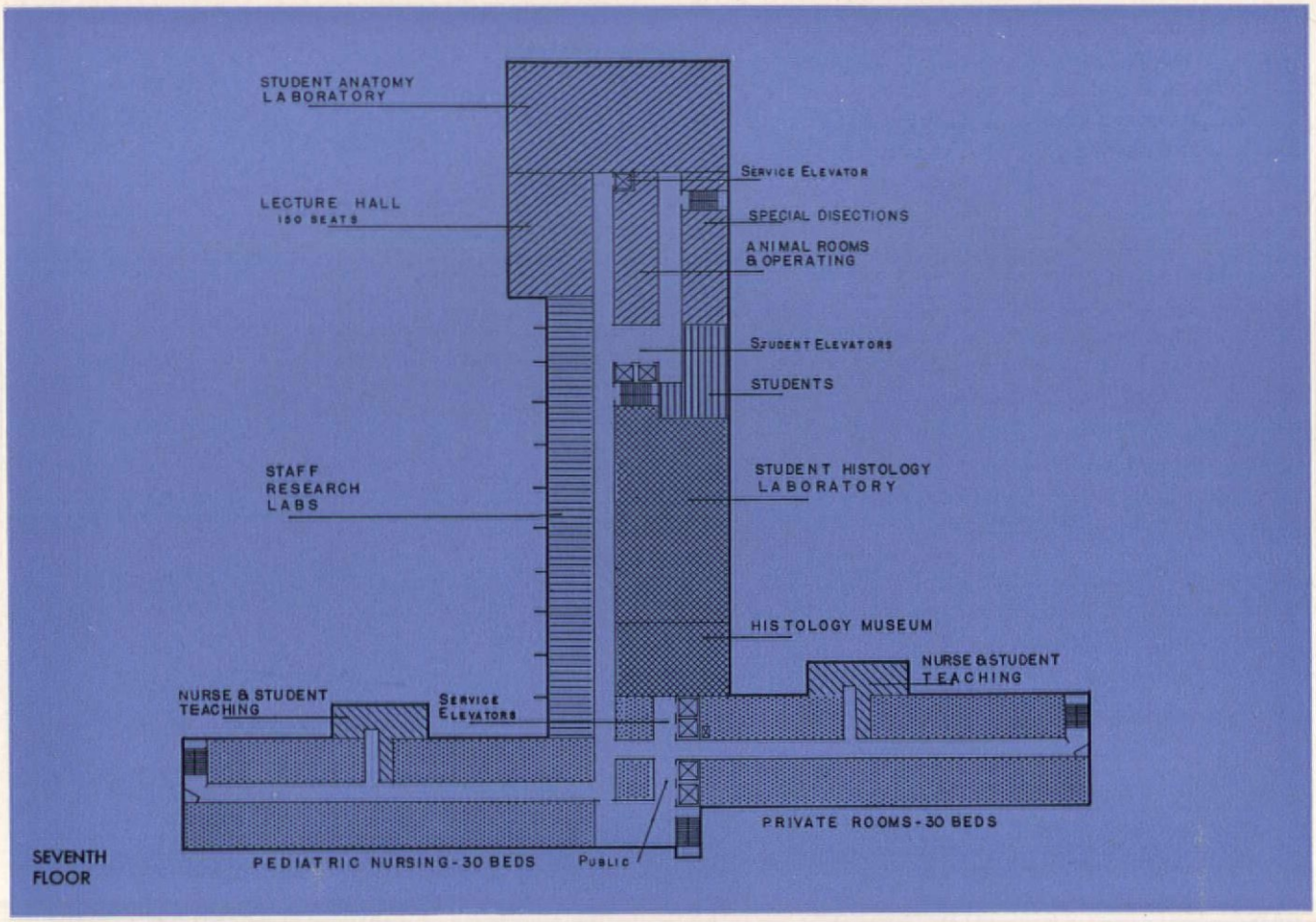

BOOK STORE
MORGUE
STUDENT AUTOPSY
STUDENT ANATOMY
MUSEUM
PATHOLOGY DEAD STORAGE
SERVICE ELEVATOR
RADIO-ACTIVE LAB
STUDENT LOCKERS AND SHOWERS
LIBRARY
MECHANICAL EQUIPMENT
EMPLOYEE & STUDENT HEALTH
EMPLOYEES LOCKERS AND SHOWERS
STUDENT ELEVATORS
SERVICE & MORGUE TUNNEL
MORGUE PICK-UP
FREIGHT
POST OFFICE
CENTRAL STORAGE
RECEIVING DOCK
UTILITIES BLDG.
SERVICE COURT
KITCHEN & STORAGE
OFFICE
COVERED WAY
CENTRAL RECORDS
EMPLOYEES ENTRY
PHARMACY
GENERAL OFFICE
HOUSEKEEPING DEPARTMENT
COMPTROLLER'S OFFICE
MEDICAL STENO POOL
NURSES LOCKER ROOM
DIAL & PBX
BASEMENT

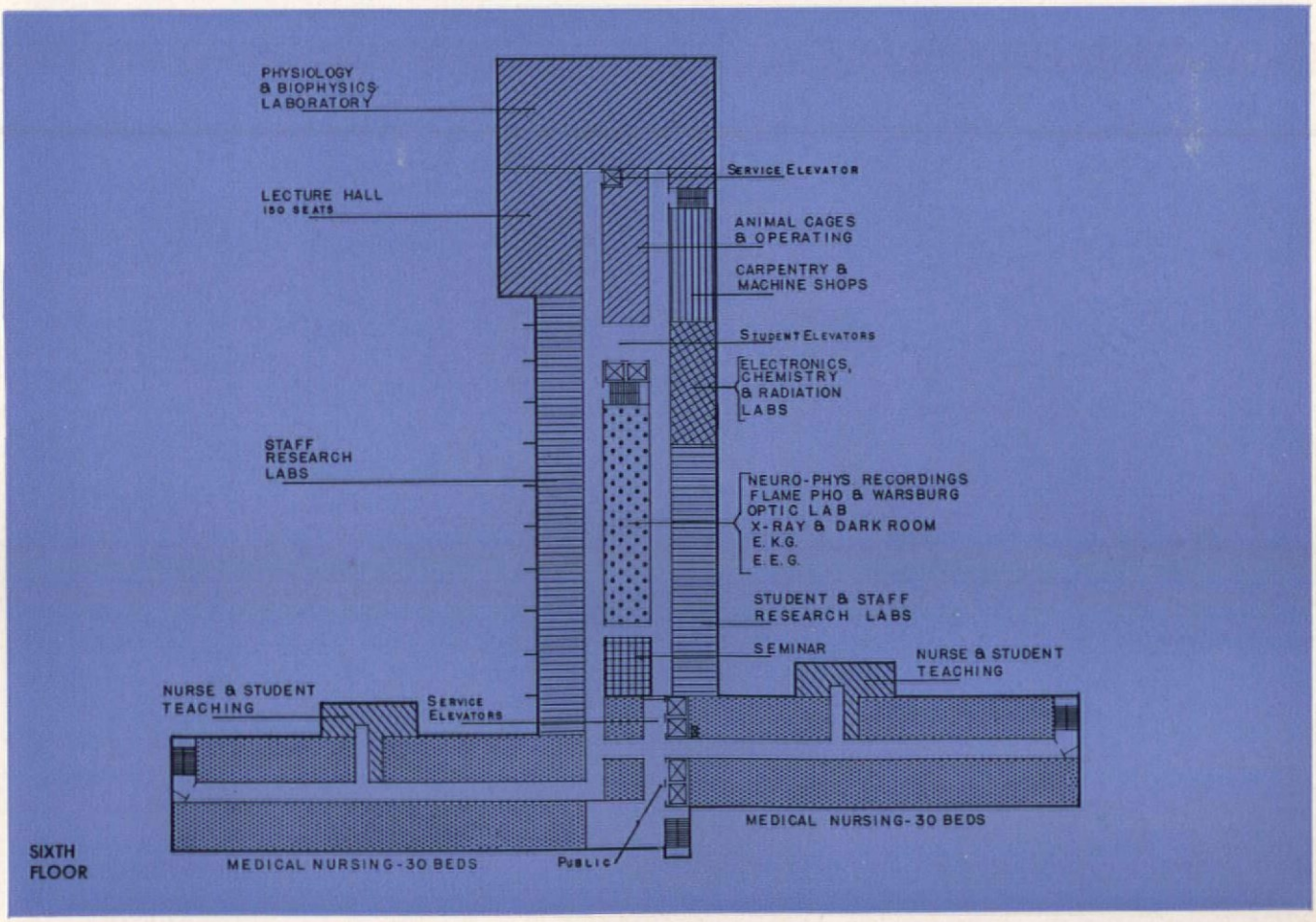

CHEMISTRY LABORATORY
SERVICE ELEVATOR
LECTURE HALL
150 SEATS
ANIMALS & STORAGE ROOMS
STAFF LABS
STUDENT ELEVATORS
CENTRAL SUPPLY
STAFF RESEARCH LABS
DUMBWAITER TO SURGERY & OBSTETRICS
CENTRAL LABORATORY
HEMATOLOGY, SEROLOGY
CHEMISTRY
URINALYSIS
BLOOD BANK
BACTERIOLOGY
PARASITOLOGY
STUDENT & NURSE TEACHING
STUDENT & NURSE TEACHING
SERVICE ELEVATORS
SURGICAL NURSING - 30 BEDS
SURGICAL NURSING - 30 BEDS
PUBLIC ELEVATORS
THIRD FLOOR


STUDENT PATHOLOGY LABORATORY
STUDENT HISTOLOGY LABORATORY
ANIMAL CAGES AND OPERATING
SERVICE ELEVATOR
LIBRARY
STUDENT LOBBY AND ELEVATORS
N
0
50
100FT.
STAFF RESEARCH LABORATORIES
SURGERY
DUMBWAITER TO CENTRAL SUPPLY
ELEVATOR TO X-RAY
POST ANESTHESIA
DOCTORS
NURSES
NURSE & STUDENT TEACHING
NURSE & STUDENT TEACHING
SERVICE ELEVATORS
SURGICAL NURSING - 30 BEDS
SURGICAL NURSING - 30 BEDS
PUBLIC ELEVATORS
SECOND FLOOR

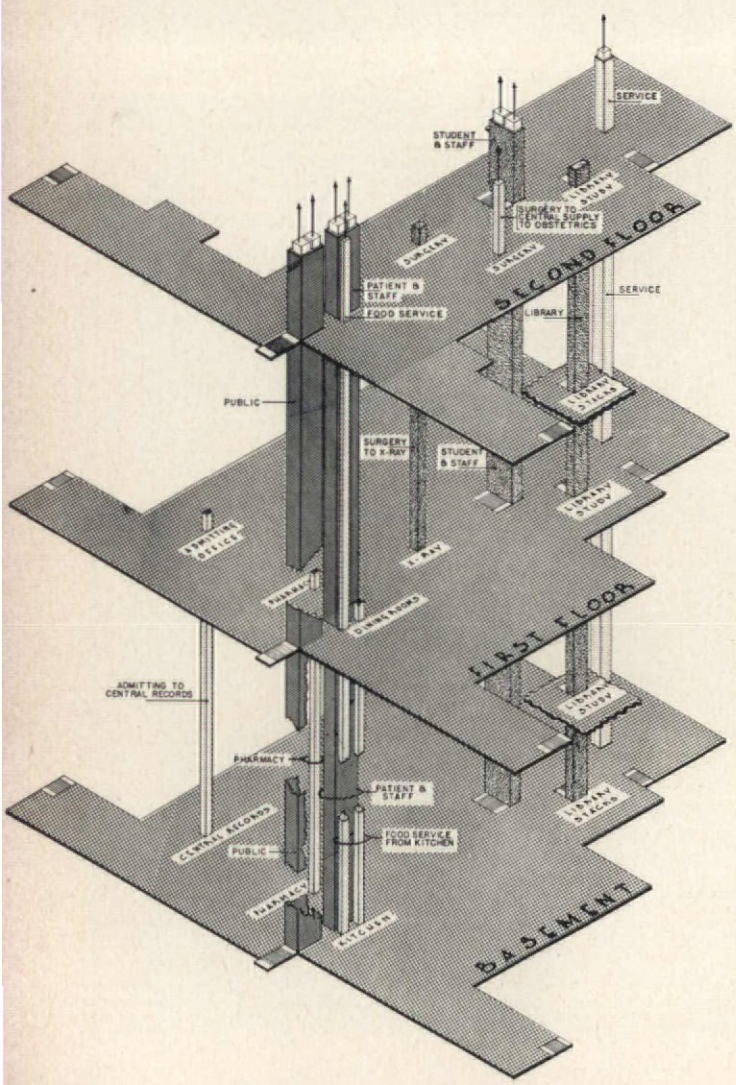

BACTERIOLOGY & PARASTOLOGY LABORATORY
LECTURE HALLS
SERVICE ELEVATOR
ANIMAL ROOMS
BACTERIOLOGY LABS
STUDENT ELEVATORS
DEPARTMENT OFFICES
STAFF RESEARCH LABS
EXPERIMENTAL ANIMAL SURGERY
GRADUATE & STUDENT LABS
NURSE & STUDENT TEACHING
NURSE & STUDENT TEACHING
SERVICE ELEVATORS
MEDICAL NURSING - 30 BEDS
MEDICAL NURSING - 30 BEDS
PUBLIC ELEVATORS
FIFTH FLOOR

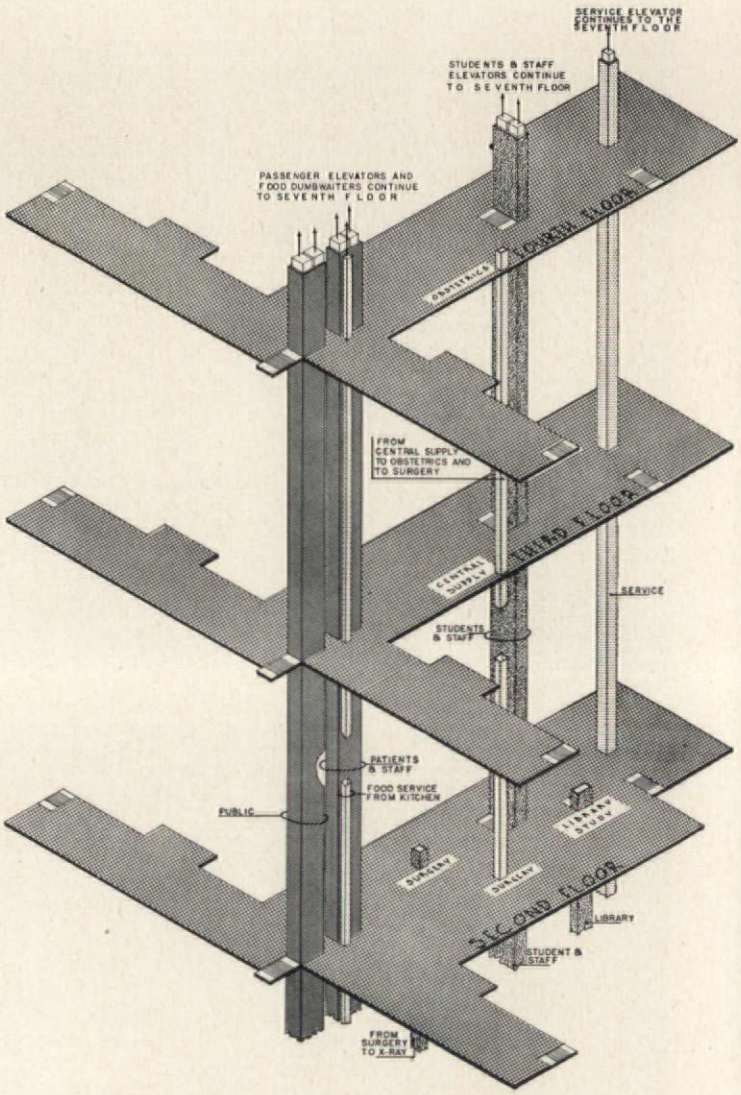

PHARMACOLOGY LABORATORY
SERVICE ELEVATORS
LECTURE HALLS
ANIMAL CAGE & OPERATING ROOMS
N
LABORATORIES & SHOPS
0 50 100FT.
STUDENT ELEVATORS
DELIVERY ROOMS
STAFF RESEARCH LABORATORIES
OBSTETRICAL SUITE
NURSE & STUDENT TEACHING
NURSE & STUDENT TEACHING
SERVICE ELEVATORS
OBSTETRICAL NURSING
16 BEDS - 32 BASSINETS
OBSTETRICAL NURSING
PUBLIC ELEVATORS
FOURTH FLOOR


STUDENT ANATOMY LABORATORY
LECTURE HALL 150 SEATS
SERVICE ELEVATOR
SPECIAL DISECTIONS
ANIMAL ROOMS & OPERATING
STUDENT ELEVATORS
STUDENTS
STAFF RESEARCH LABS
STUDENT HISTOLOGY LABORATORY
HISTOLOGY MUSEUM
NURSE & STUDENT TEACHING
NURSE & STUDENT TEACHING
SERVICE ELEVATORS
PRIVATE ROOMS - 30 BEDS
PEDIATRIC NURSING - 30 BEDS
PUBLIC
SEVENTH FLOOR

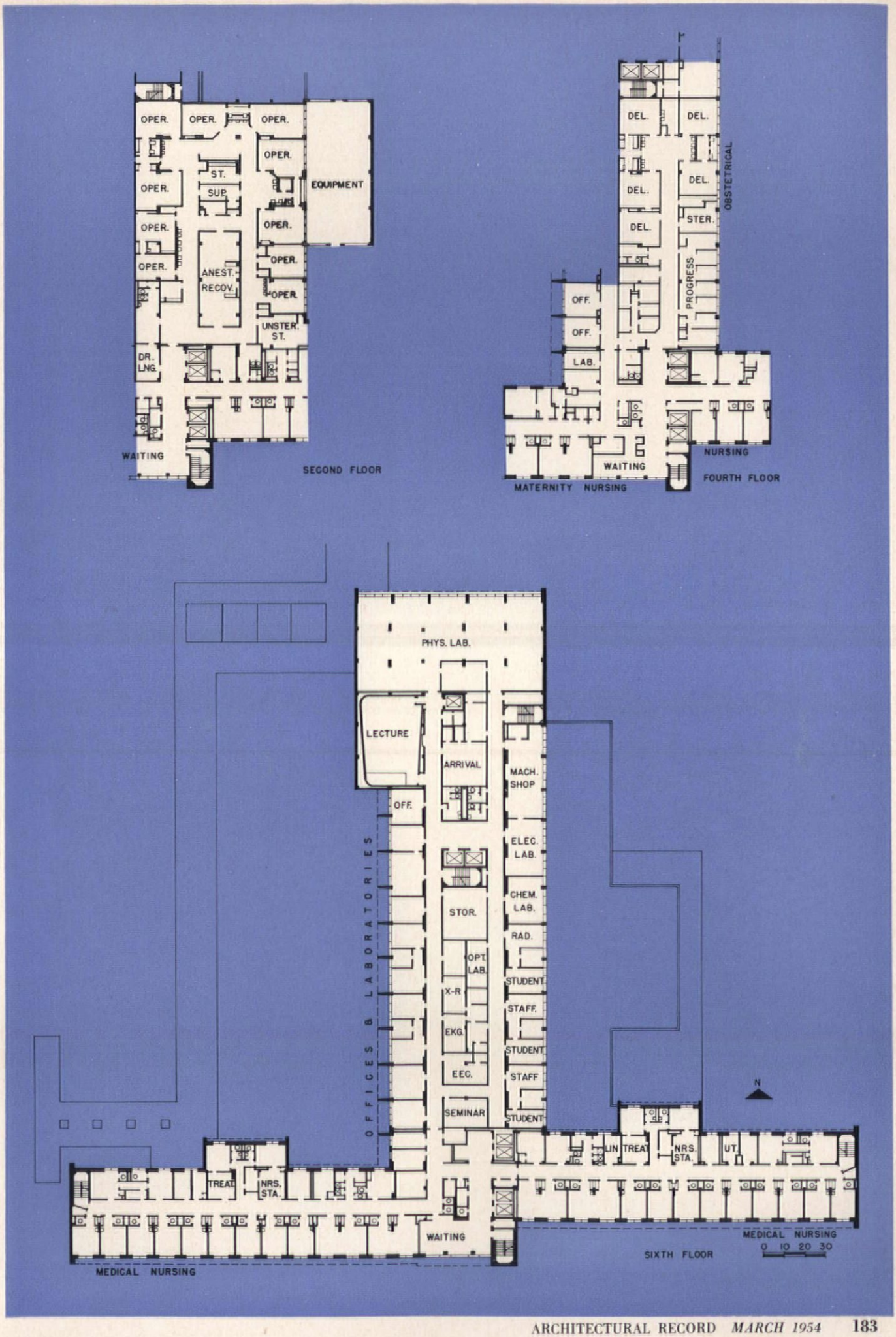

PHYSIOLOGY & BIOPHYSICS LABORATORY
LECTURE HALL 150 SEATS
SERVICE ELEVATOR
ANIMAL CAGES & OPERATING
CARPENTRY & MACHINE SHOPS
STUDENT ELEVATORS
ELECTRONICS, CHEMISTRY & RADIATION LABS
STAFF RESEARCH LABS
NEURO-PHYS RECORDINGS
FLAME PHO & WARSBURG
OPTIC LAB
X-RAY & DARK ROOM
E.K.G.
E.E.G.
STUDENT & STAFF RESEARCH LABS
SEMINAR
NURSE & STUDENT TEACHING
NURSE & STUDENT TEACHING
SERVICE ELEVATORS
MEDICAL NURSING - 30 BEDS
MEDICAL NURSING - 30 BEDS
PUBLIC
SIXTH FLOOR

The diagrams of vertical supply and transportation systems, shown below, could become a good argument for the vertical type of hospital building, particularly when the plan is confused by the addition of a medical school. In this regard, notice especially the separate elevator connecting a stacked-up system of libraries. This puts individual study libraries close to their respective fields of subject matter, but connects them for easy cross reference. Students and staff have elevators of their own, to keep school traffic out of hospital circulation as much as possible. Individual dumbwaiters connect central sterilizing to obstetrics and to surgery, also surgery to x-ray. There are also dumbwaiters from the central records room to the admitting office, and between pharmacies on various levels. In the main, however, the heavy traffic concentrates in the elevators and food service dumbwaiters at the juncture of the T. Two banks of elevators keep staff and service separate from the public.





The double corridor is used on all floors. The sixth floor plan, opposite page, is typical in this respect, with double corridor serving two outer rows of offices and laboratories, with storage rooms and dark laboratory spaces between the two corridors. On the second floor, at surgery, the double corridor becomes triple, a sort of double corridor to the second power. Here, and in the fourth floor obstetrical suite, the double corridor becomes a device for providing a cul de sac location.


OPER.
OPER.
OPER.
OPER.
OPER.
OPER.
OPER.
OPER.
OPER.
OPER.
ST.
SUP.
ANEST.
RECOV.
EQUIPMENT
UNSTER. ST.
DR. LNG.
WAITING
SECOND FLOOR
DEL.
DEL.
DEL.
DEL.
DEL.
DEL.
STER.
OBSTETRICAL
PROGRESS
OFF.
OFF.
LAB.
WAITING
NURSING
MATERNITY NURSING
FOURTH FLOOR
PHYS. LAB.
LECTURE
ARRIVAL
OFF.
MACH. SHOP
ELEC. LAB.
CHEM. LAB.
STOR.
RAD.
OPT. LAB.
X-R
STUDENT
STAFF
EKG.
STUDENT
EEG.
STAFF
SEMINAR
STUDENT
OFFICES & LABORATORIES
N
LIN
TREAT
NRS. STA.
UT.
TREAT
NRS. STA.
WAITING
MEDICAL NURSING
SIXTH FLOOR
MEDICAL NURSING
0 10 20 30

90-BED HOSPITAL WITH EXCEPTIONAL PLAN

Memorial Hospital of Sheridan County, Sheridan, Wyoming

Fisher & Fisher, Architects

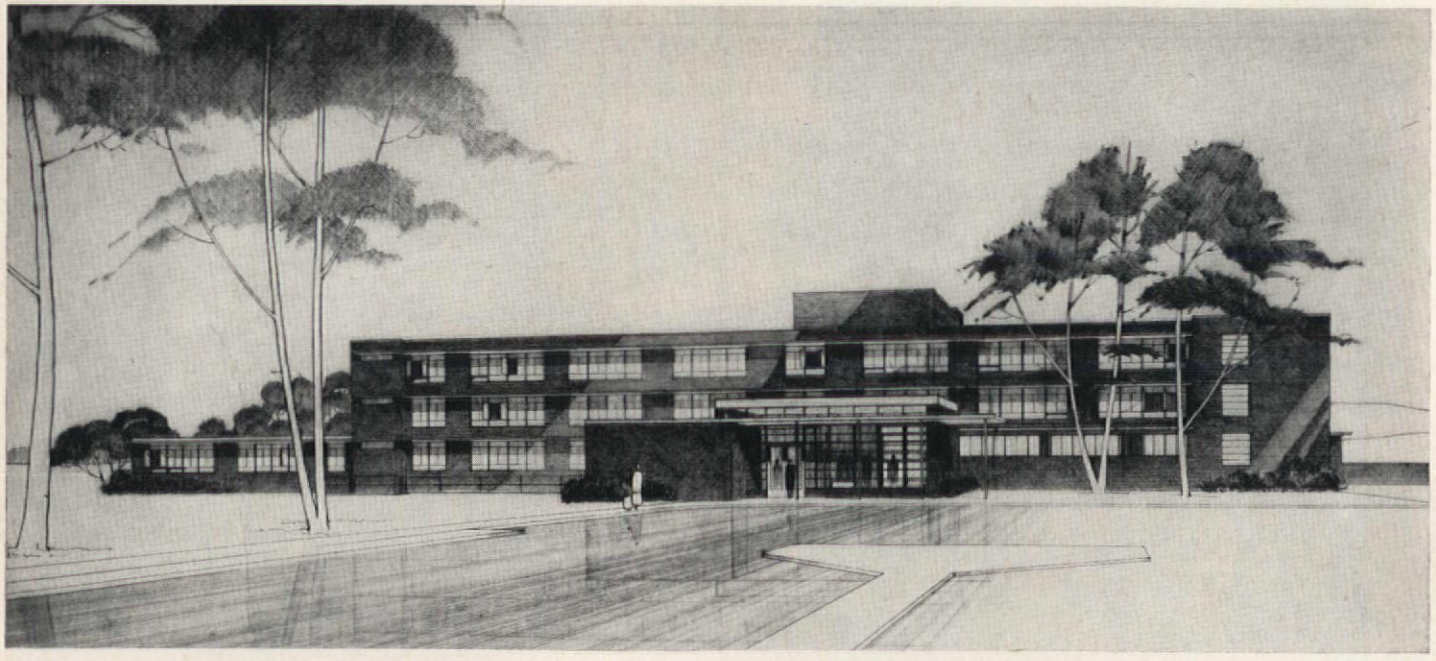
James Hamilton & Associates, Medical Consultants

Milo S. Ketchum, Structural Engineer

Marshall & Johnson, Inc., Mechanical Engineers

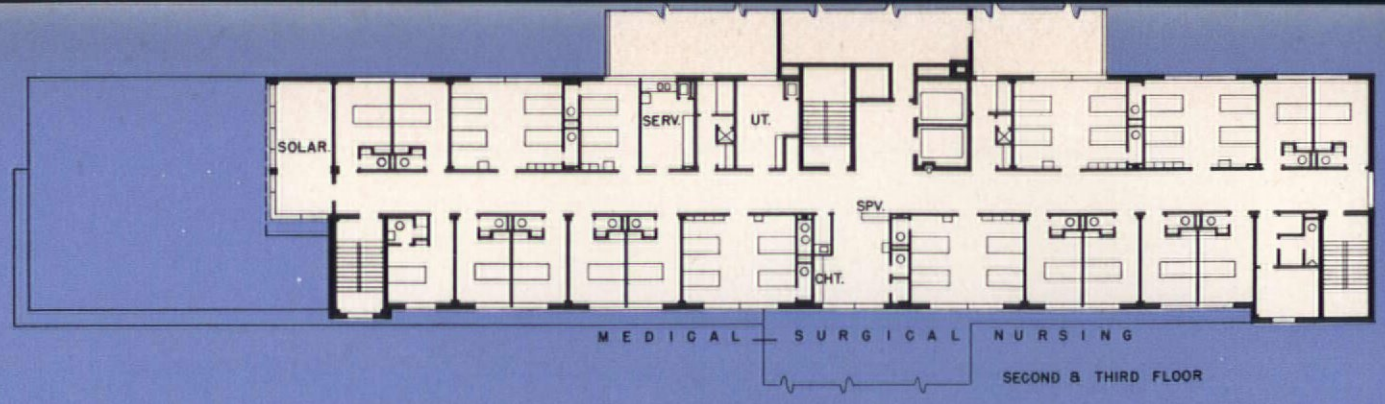
WHILE THIS HOSPITAL warrants study for its well integrated plan, the visitor is first struck by the magnificence of its site, high above the city with uninterrupted views of mountains on three sides. There is some significance here too, as the hospital was originally contemplated for a poor site within the city, and the new site, with its "beauty, clarity, feeling of stability, along with a sense of excitement" was not accepted without a struggle.

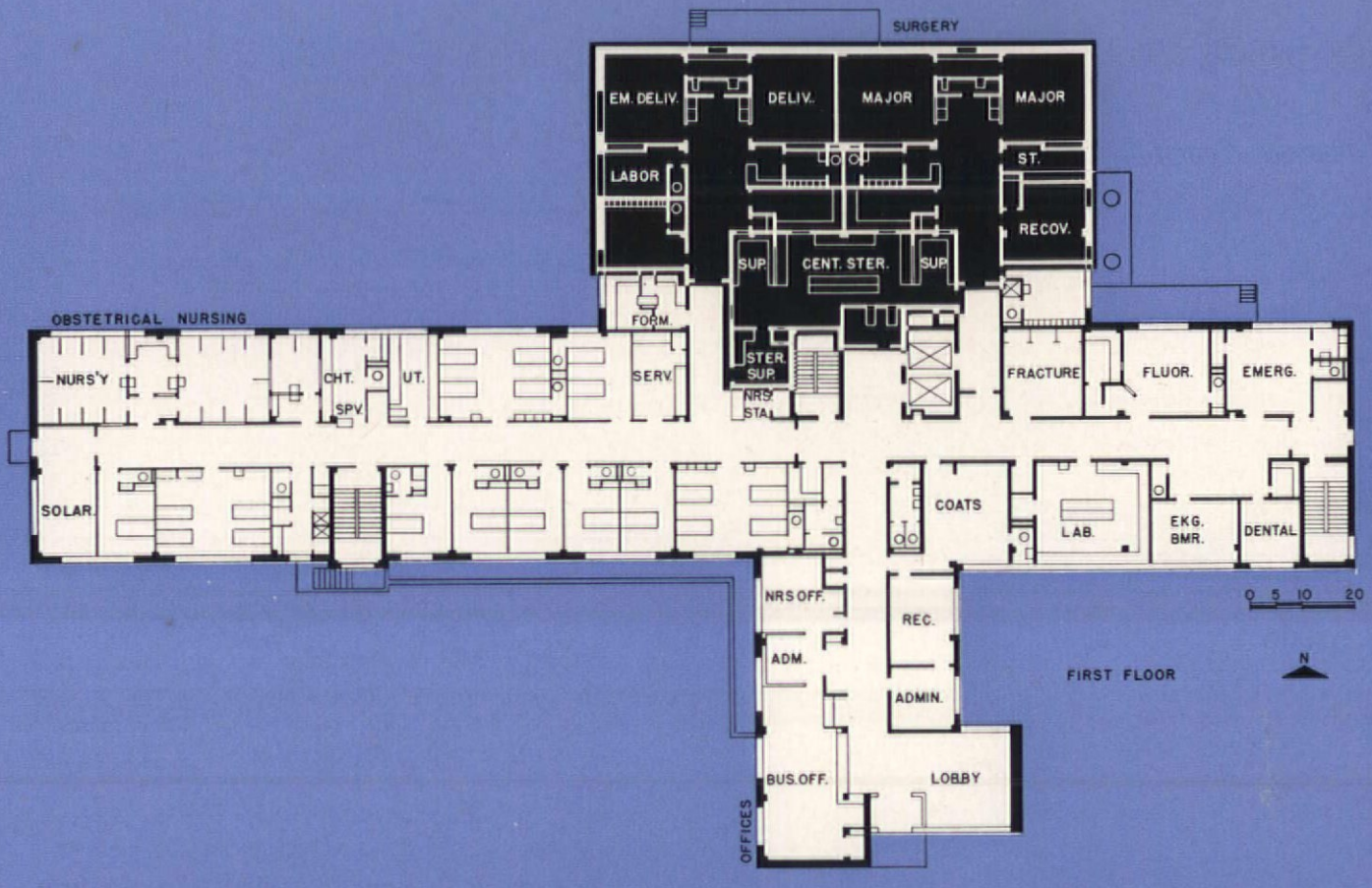
The keynote of the first floor planning is the grouping together of all direct patient services. Such a highly integrated correlation promotes not only construction economy but also economy and convenience of operation by a minimum personnel. Notice especially the manner in which surgical and obstetrical suites are isolated from each other and from the rest of the hospital, while still being adjacent to elevators. The central sterilizing department feeds sterile supplies in three directions from a pivotal location (with a dumbwaiter serving upper floors). Routing of soiled materials is very nearly as simple. One of the elevators can be isolated for exclusively surgical use. Obstetrical suite opens only to the maternity corridor. The maternity

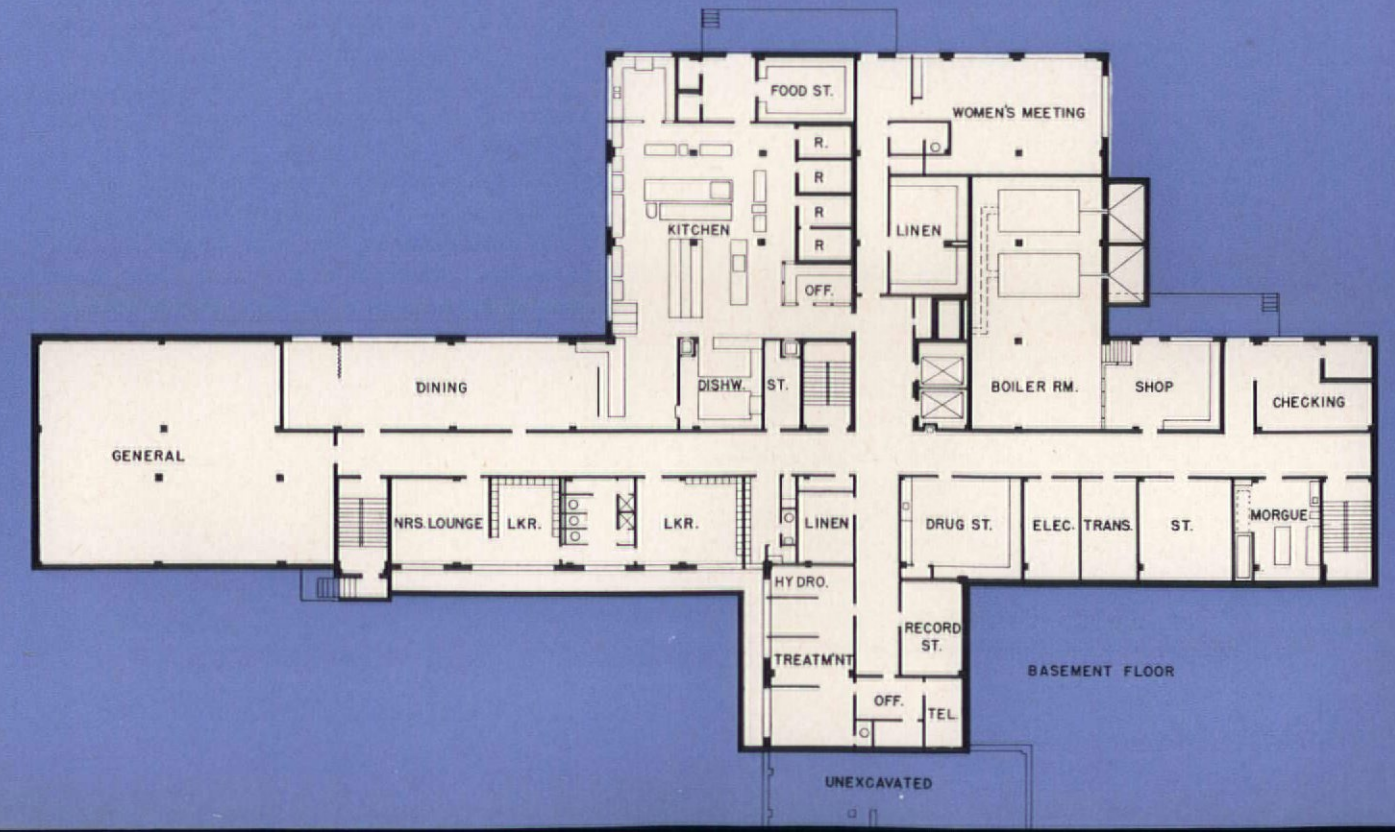


nursing unit is kept separate from other patient areas.

A feature of the nursing units is elimination of the two-bed room, this at the suggestion of the medical consultant. He feels that the coincidence of personality maladjustment between two persons is high.


SOLAR
SERV.
UT.
SPV.
CHT.
MEDICAL — SURGICAL NURSING
SECOND & THIRD FLOOR


SURGERY
EM. DELIV.
DELIV.
MAJOR
MAJOR
LABOR
ST.
RECOV.
SUP.
CENT. STER.
SUP.
OBSTETRICAL NURSING
FORM.
NURS'Y
CHT.
UT.
SPV.
SERV.
STER. SUP.
NRS. STA.
FRACTURE
FLUOR.
EMERG.
SOLAR
COATS
LAB.
EKG. BMR.
DENTAL
NRS OFF.
REC.
ADM.
ADMIN.
BUS. OFF.
LOBBY
OFFICES
0 5 10 20
FIRST FLOOR
N


FOOD ST.
WOMEN'S MEETING
R.
R
R
R
KITCHEN
LINEN
OFF.
DINING
DISHW.
ST.
BOILER RM.
SHOP
CHECKING
GENERAL
NRS. LOUNGE
LKR.
LKR.
LINEN
DRUG ST.
ELEC.
TRANS.
ST.
MORGUE
HYDRO.
RECORD ST.
TREATMNT
OFF.
TEL.
BASEMENT FLOOR
UNEXCAVATED

HOSPITAL FOR A TOWN OF 5,000 PEOPLE

Pioneers Memorial Hospital, Rocky Ford, Col.

Charles H. Kellogg, Architect

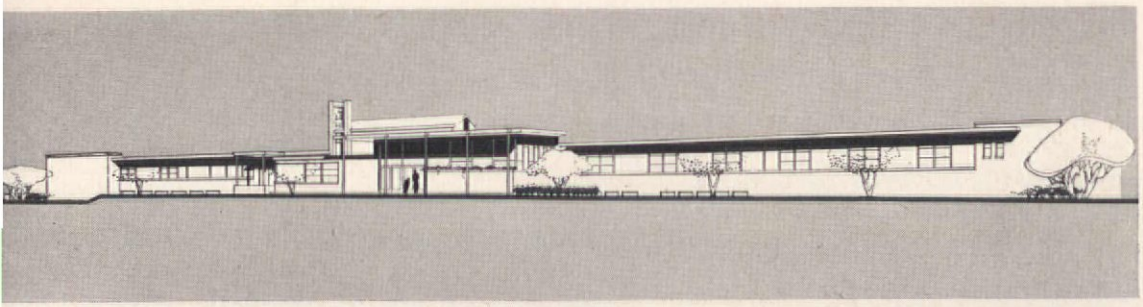
One of the purposes of the Hill-Burton hospital program is admirably illustrated by this hospital for a town of 5,000. Initiated by local citizens, built with local, state and federal funds, it demonstrates the possibility of extending hospital services to small towns and rural areas. This one also houses a branch of the Otero County Health Department; also it was designed for certain training functions for nursing personnel

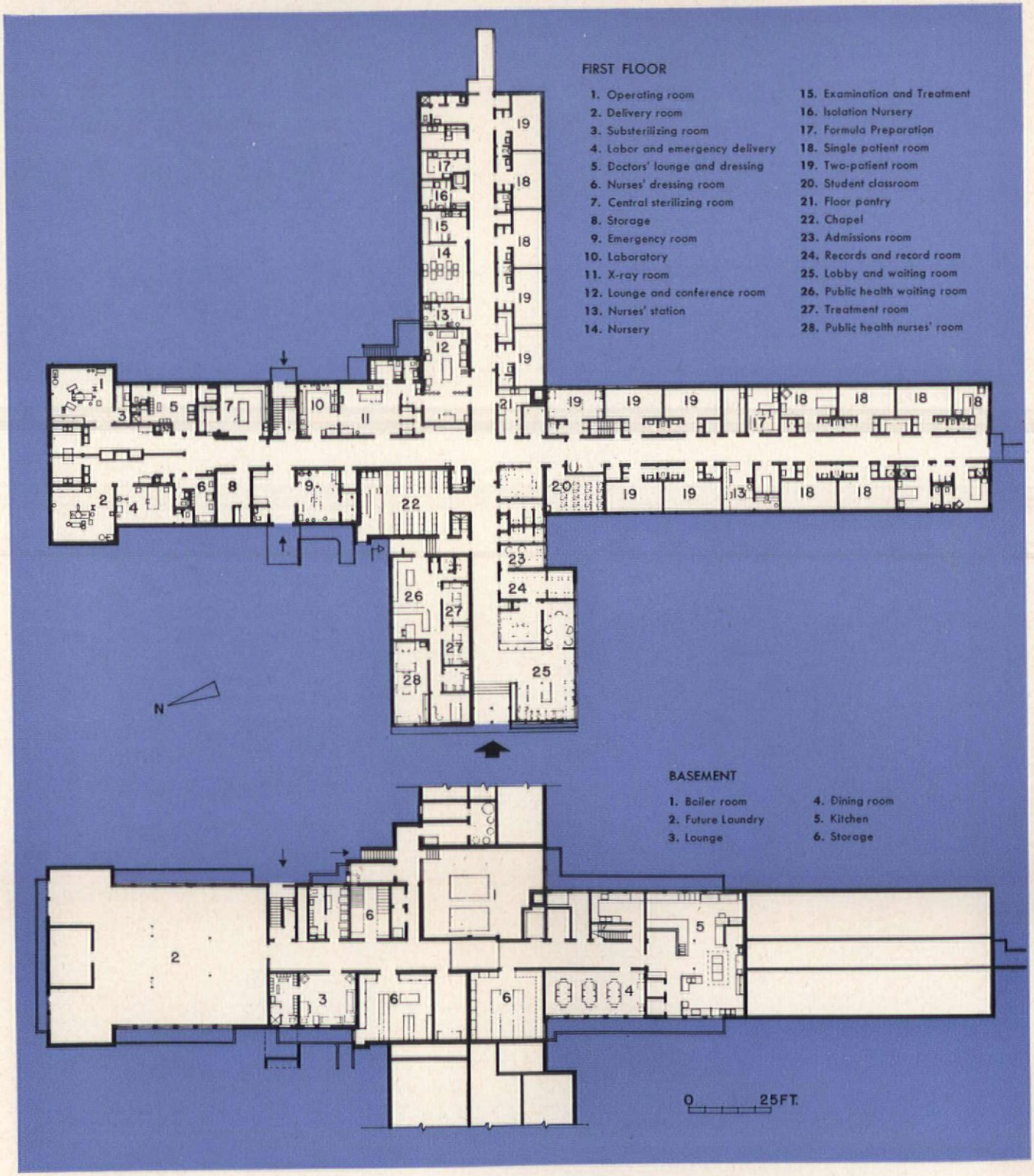
A HOSPITAL for a town of 5,000 population is of itself a commentary on accomplishments of the Hill-Burton program. It was usually considered uneconomical, and it was said that so small a hospital as 30 beds could not really be operated. But when a community decides it needs a hospital it doesn't stop for rules-of-thumb. Actually this hospital operates as one outlying unit of the Mennonite General Hospital at La Junta, Col.; it will also serve as a partial training unit. These considerations have had their affect on the planning.

This is another of the new hospitals to use many two-bed rooms with beds paralleling the windows, each patient enjoying the same outlook. Overhanging roofs give protection from the summer sun, and rooms are cooled by evaporative units. Each room has either private or connecting toilet, with bedpan attachments. All but the three isolation rooms are thus arranged for two beds.

It is unusual, of course, to have two nursing stations for a total of 30 beds, but here the separation is kept between surgical and maternity groups. Also the two stations are part of the training program. During night hours, however, the two stations merge in the supervisor's office at the junction of the cross.

A design principle emphasized was planning for a minimum of personnel. One example is the grouping of the laboratory, X-ray department, lounge and conference room, so that one technician can operate both X-ray and laboratory, and is quickly available for conference with doctors. Rooms in the administrative suite are also interconnected for the convenience of a small staff. The kitchen layout was also studied in this respect; the architect reports that the kitchen can be staffed by just two people.




FIRST FLOOR
1. Operating room
2. Delivery room
3. Substerilizing room
4. Labor and emergency delivery
5. Doctors' lounge and dressing
6. Nurses' dressing room
7. Central sterilizing room
8. Storage
9. Emergency room
10. Laboratory
11. X-ray room
12. Lounge and conference room
13. Nurses' station
14. Nursery
15. Examination and Treatment
16. Isolation Nursery
17. Formula Preparation
18. Single patient room
19. Two-patient room
20. Student classroom
21. Floor pantry
22. Chapel
23. Admissions room
24. Records and record room
25. Lobby and waiting room
26. Public health waiting room
27. Treatment room
28. Public health nurses' room
N
BASEMENT
1. Boiler room
2. Future Laundry
3. Lounge
4. Dining room
5. Kitchen
6. Storage
0 25FT.

SPRAWLING HOSPITAL FOR THE WIDE OPEN SPACES

D. M. Cogdell Memorial Hospital, Snyder, Texas

The Butler-Brasher Company, Architects-Engineers

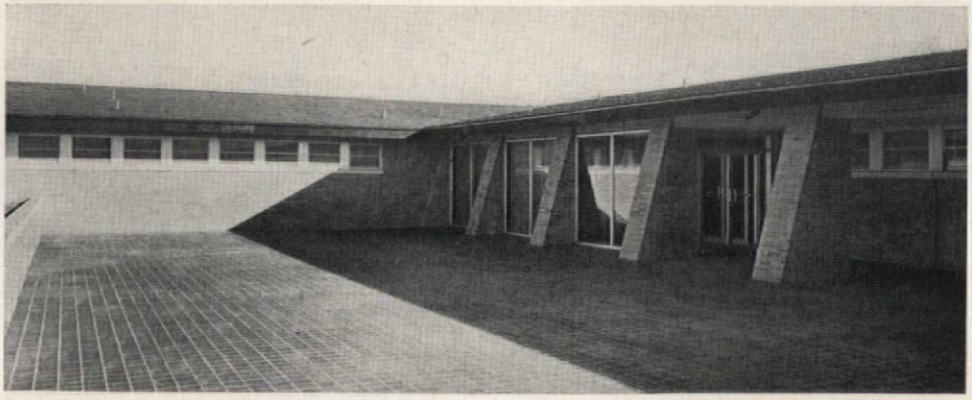
ON THE FLAT LANDS of Texas it is a little difficult to imagine any straining for compactness. Perhaps it is natural, then, that this hospital rambles around the countryside with all the freedom in the world. And in the flat limitlessness of the country it finds a design motive which is strongly expressed.

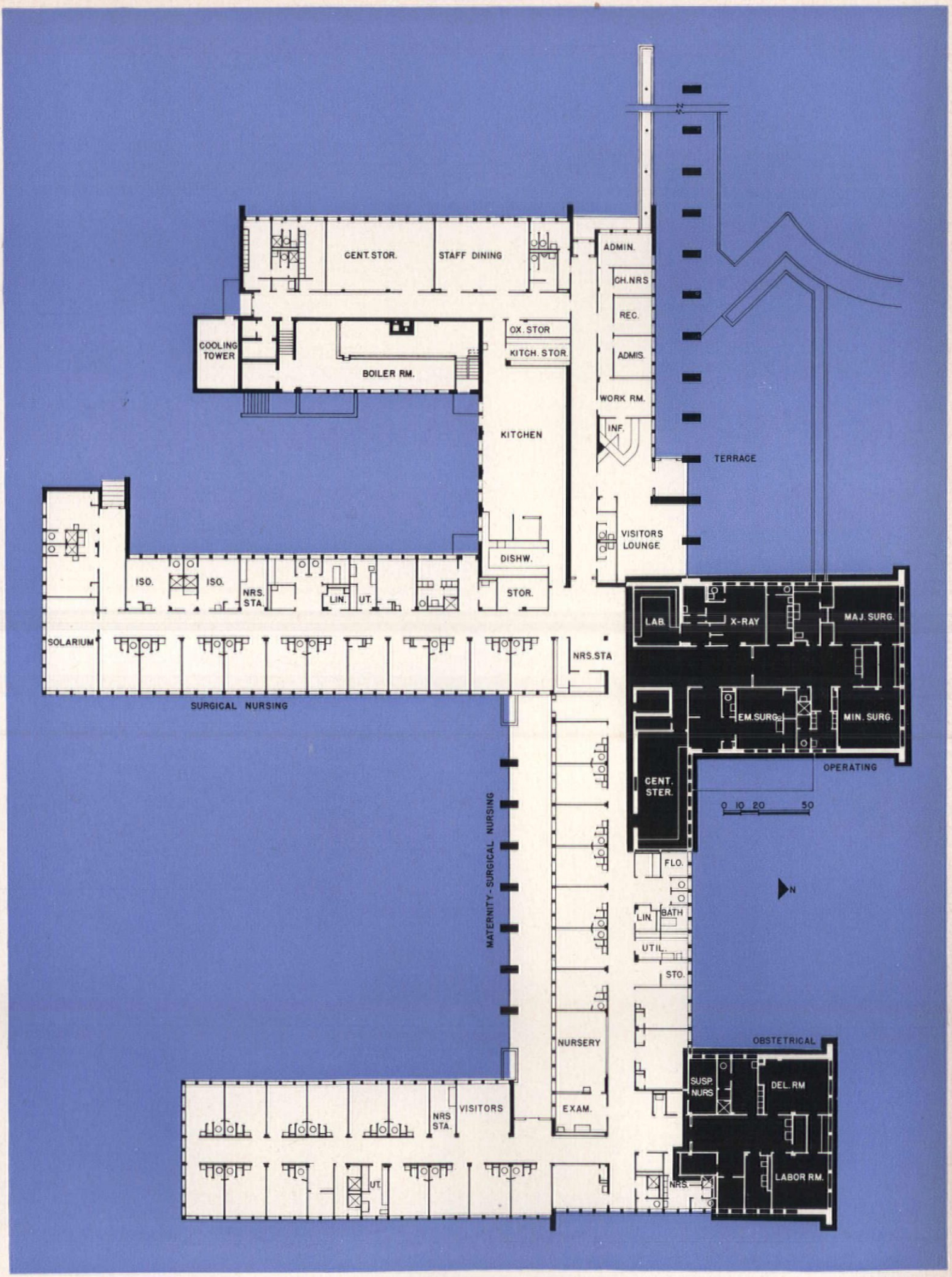
Though by usual standards it is a small hospital (50 beds nominal capacity) it has quite extensive facilities. And it puts these facilities where it wants them — a full surgical suite in its own wing, a maternity suite in another. X-ray department, laboratory, emergency room, and central sterilizing group around the surgical suite, convenient to it yet positively isolated from it.

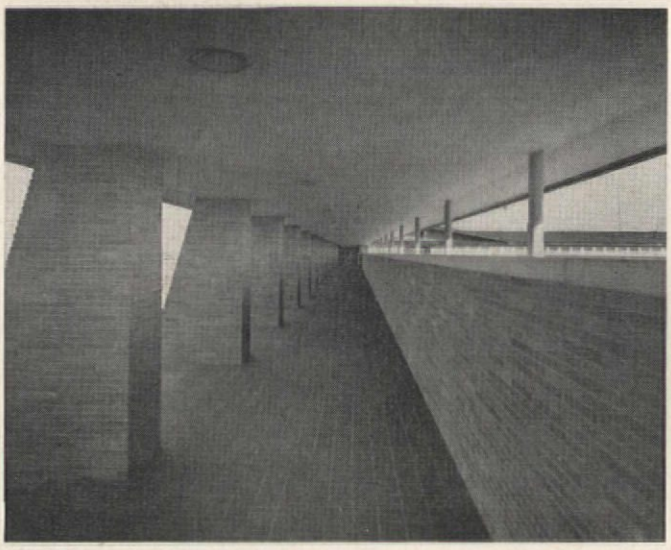
COST DATA

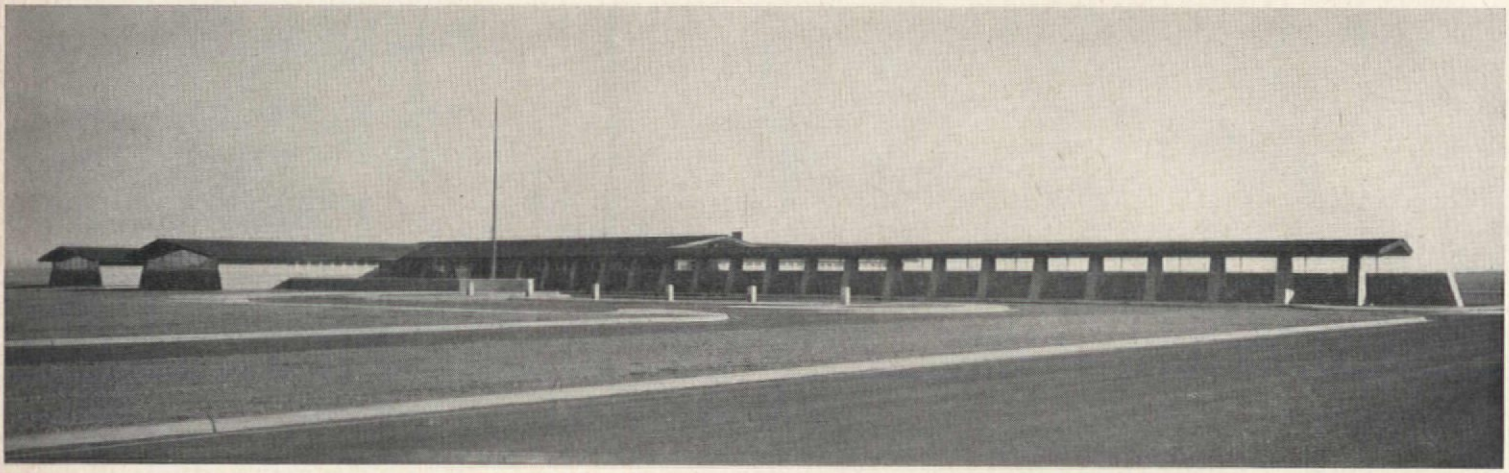
Construction	$643,581.80
Mechanical	229,613.00
Electrical	58,024.80
	$931,219.60
Architectural	55,873.17
	$987,092.77
X-ray, Group I & II Equipment	91,449.50
	$1,078,542.27

The two principal nursing units shoot off logically from those two main departments — surgical and maternity — though they are connected by a third nursing unit which can take either type of patient. While at a glance the travel distances seem long, it will be noted that most activity for the nurses is concentrated.

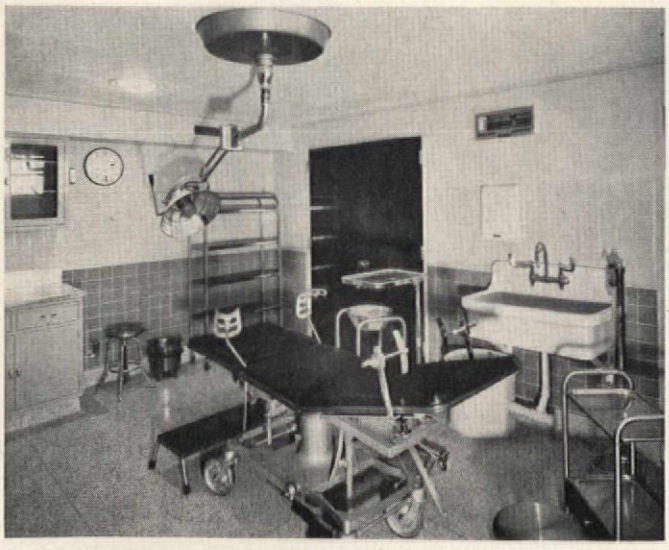


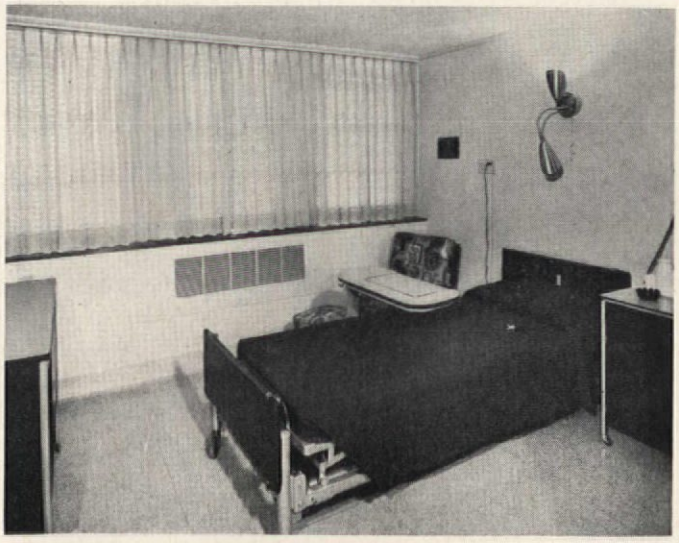

CENT. STOR.
STAFF DINING
ADMIN.
CH. NRS
REC.
ADMIS.
WORK RM.
INF.
TERRACE
COOLING TOWER
BOILER RM.
OX. STOR
KITCH. STOR.
KITCHEN
VISITORS LOUNGE
DISHW.
STOR.
ISO.
ISO.
NRS. STA.
LIN.
UT.
SOLARIUM
NRS. STA
SURGICAL NURSING
LAB.
X-RAY
MAJ. SURG.
EM. SURG.
MIN. SURG.
OPERATING
CENT. STER.
0 10 20 50
FLO.
N
LIN.
BATH
UTIL.
STO.
MATERNITY - SURGICAL NURSING
NURSERY
OBSTETRICAL
SUSP. NURS
DEL. RM
VISITORS
NRS STA.
EXAM.
UT.
NRS.
LABOR RM.



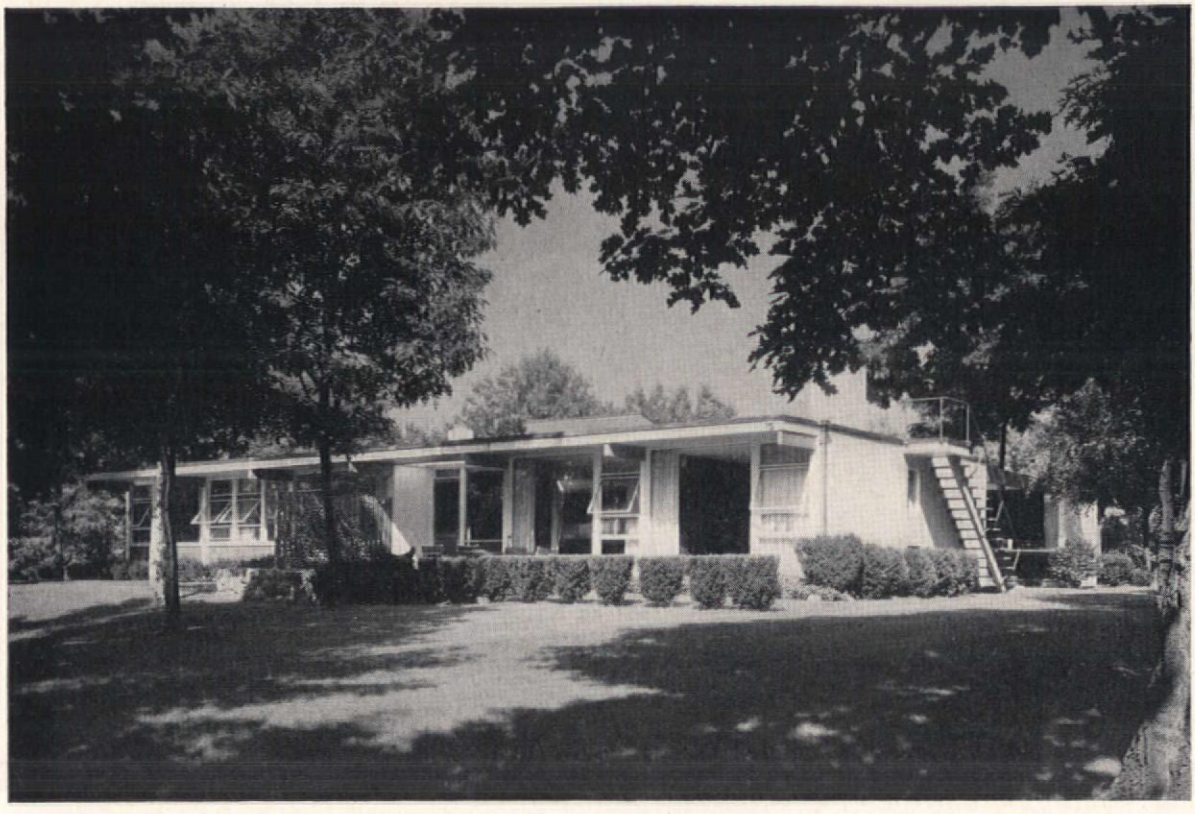


A hospital for a limitless land, this scheme makes a virtue out of distances. Though, as the plan of the previous page shows, the building is sharply departmentalized, so that walking is not the factor that might be supposed. Certainly it is a hospital that gives minimum meaning to the horrible notion of "confinement," and, once landscaped, will offer many pleasant views





© Ezra Stoller



1. Hugh Stubbins, Architect

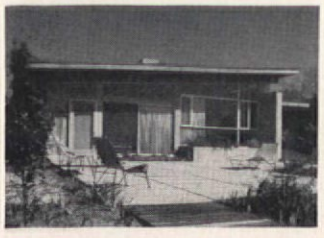
3 HOUSES

Each Designed to Meet the Problems of its Specific Setting

A HOUSE designed for its particular site, capitalizing on the environmental advantages and minimizing the shortcomings in the surroundings, seems such an obvious and natural solution when one builds — yet the percentage of residences so conceived is undoubtedly shockingly small. Architects have only scratched the surface as far as volume of residential work is concerned; but herewith are three examples showing the lasting benefits of complete architectural service.

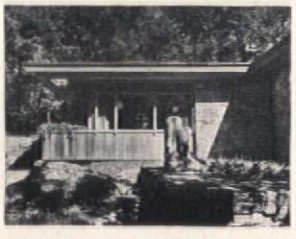
There is a Massachusetts house designed to overlook a river in two directions; a residence on a flat, treeless plot in a built-up neighborhood in Alabama; and a home on a secluded rock ledge in the Connecticut hills. Three disparate properties, each holding a house tailored to a specific scene.

2. Sherlock, Smith & Adams, Architects

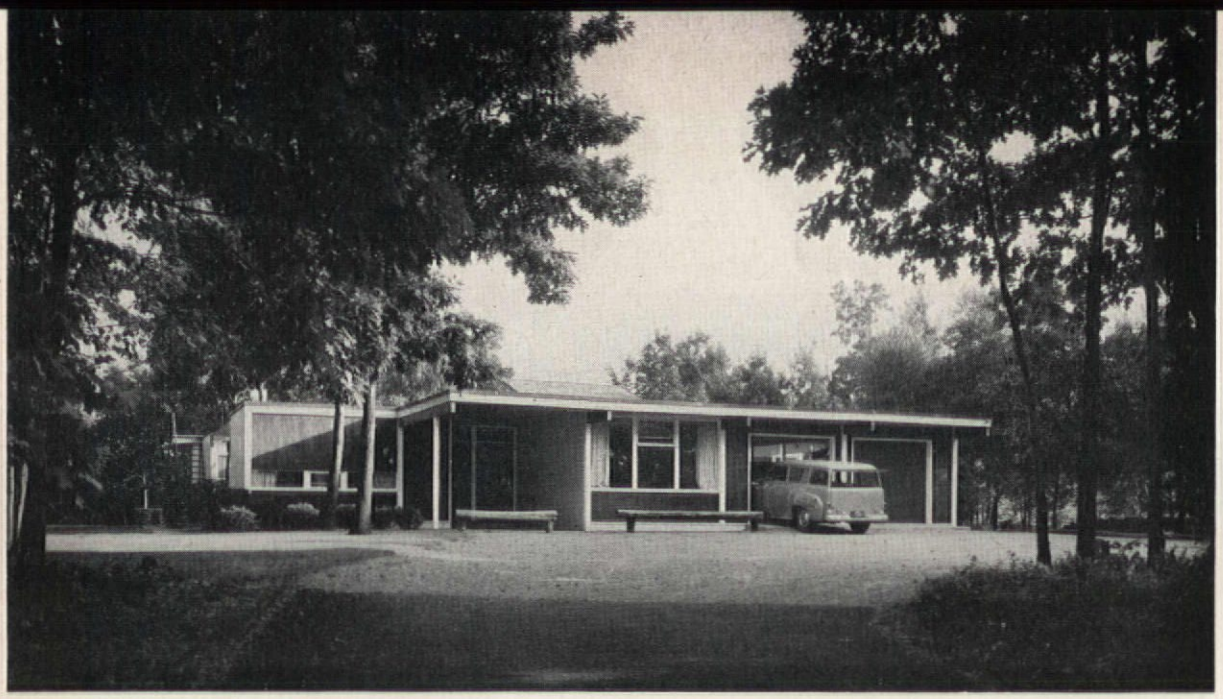


Joseph W. Molitor

3. Joseph Salerno, Architect



P. E. Guerrero

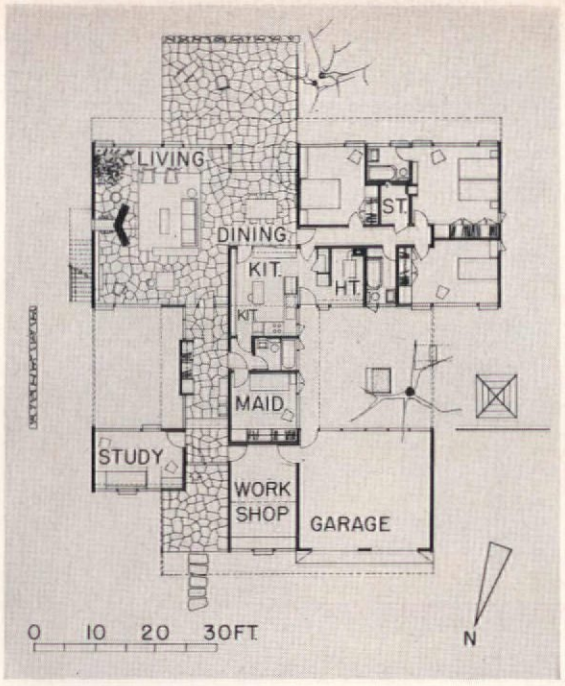


1. THE VIEW SHAPED THIS HOUSE

Hugh Stubbins, Architect

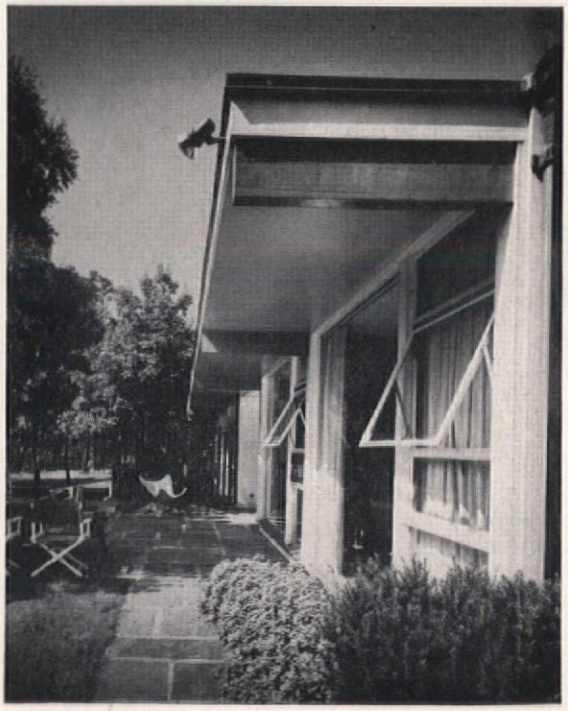
THE HIGHLY SUCCESSFUL two-way character of the living area, below, came about in gaining a view of the Charles River in two directions. The outside stair to the dead-level roof, p. 191, was requested by the client for the same reason. The unusual free-standing fireplace is built of stone and plaster.

Study of the plan and photographs will reveal several points worth noting: living, dining and principal bedrooms oriented to the view, with bedrooms set apart for privacy by a plan recess and wood slat screen, bottom photo; the long entrance hall, photo below plan, which separates study and workshop from living and can be entered from the garage; the central kitchen, located adjacent the children's play court and drying yard for control and access; the orderly organization of the plan elements within a modular post and lintel structural system, which is in turn frankly expressed in the finished house, both inside and out.



Weston, Massachusetts

© Ezra Stoller

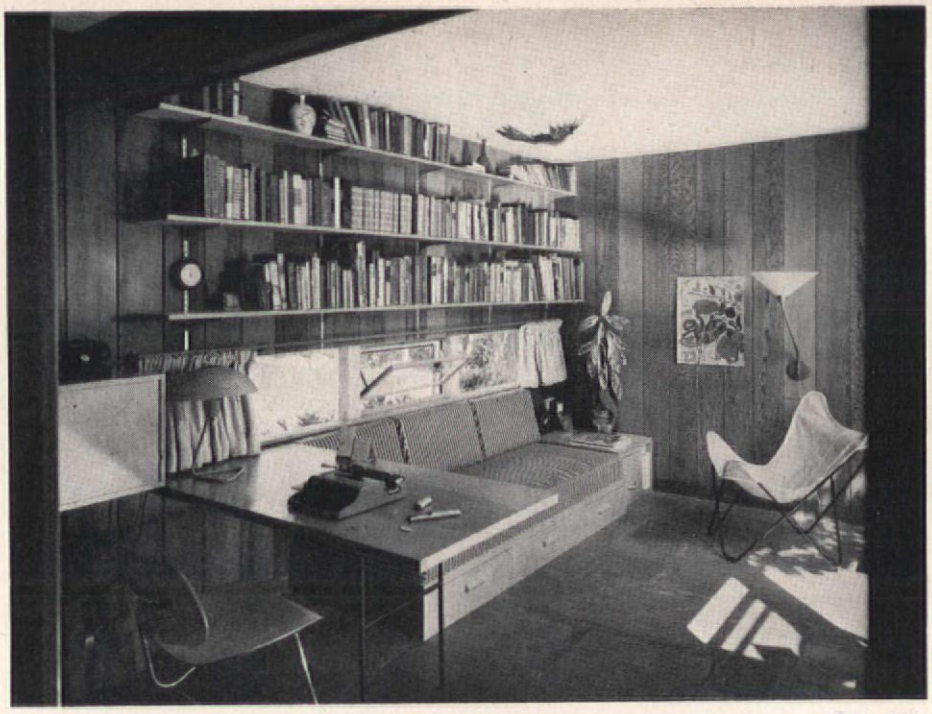


The photo immediately below shows the cheerful dining area and its adjacent terrace for outdoor dining with the river view. The kitchen divider is a two-way pass through cabinet, bottom photo, finished in natural redwood with sliding panels of obscure glass and plastic. The kitchen, left, achieves balanced light and ventilation from a clerestory and the windows opposite.

On the right page, bottom, is a view of the court between living area and study, top photo. This pleasant in-and-out and tying-together relationship is enhanced by the device of carrying through the modular lintel for structural expression and unity.

1. THE VIEW SHAPED THIS HOUSE

Hugh Stubbins, Architect



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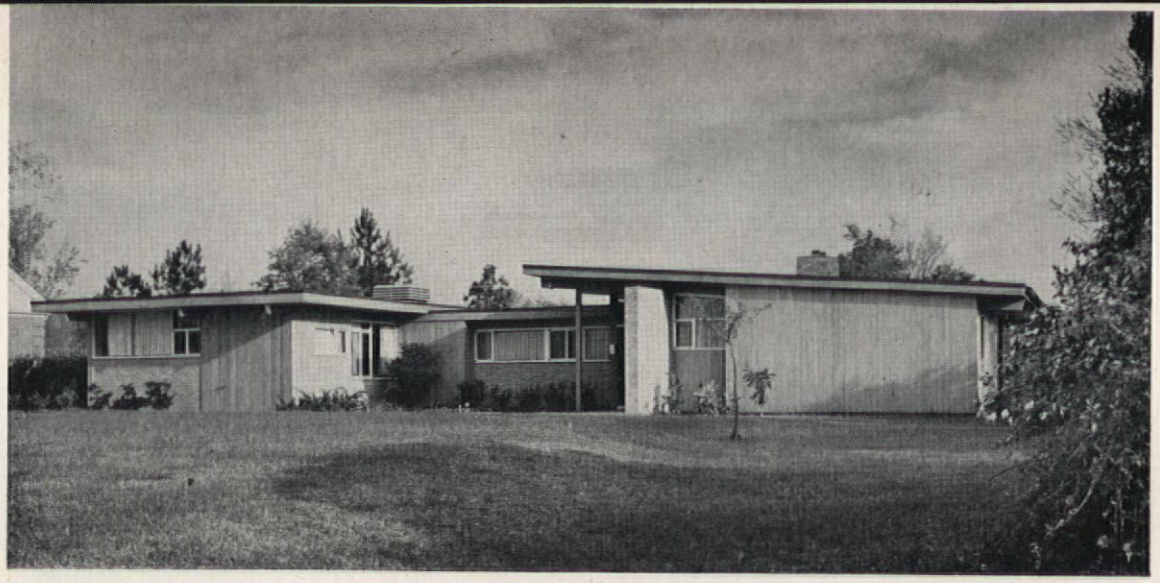
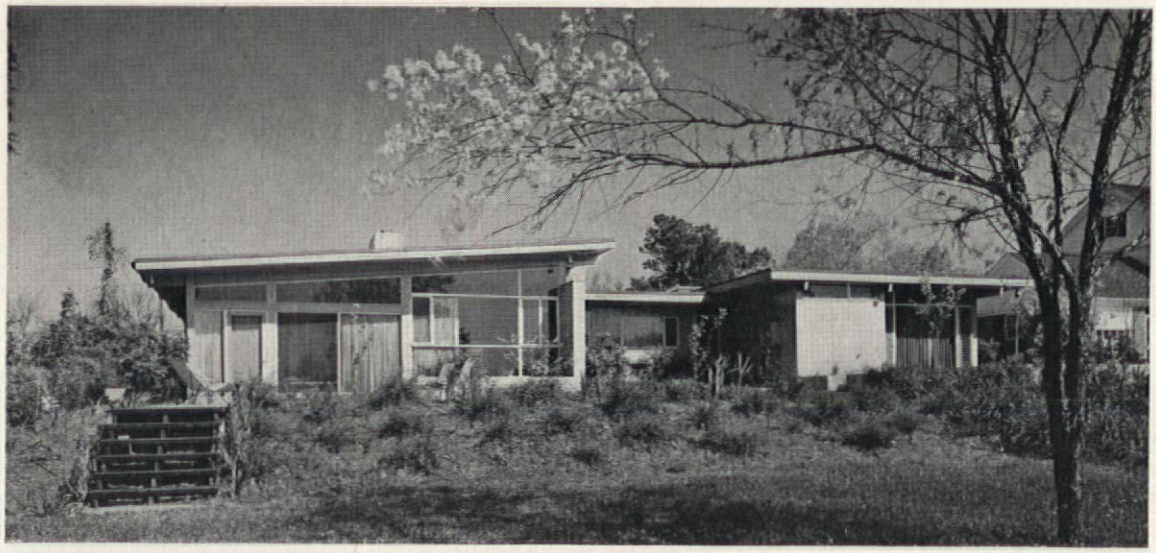
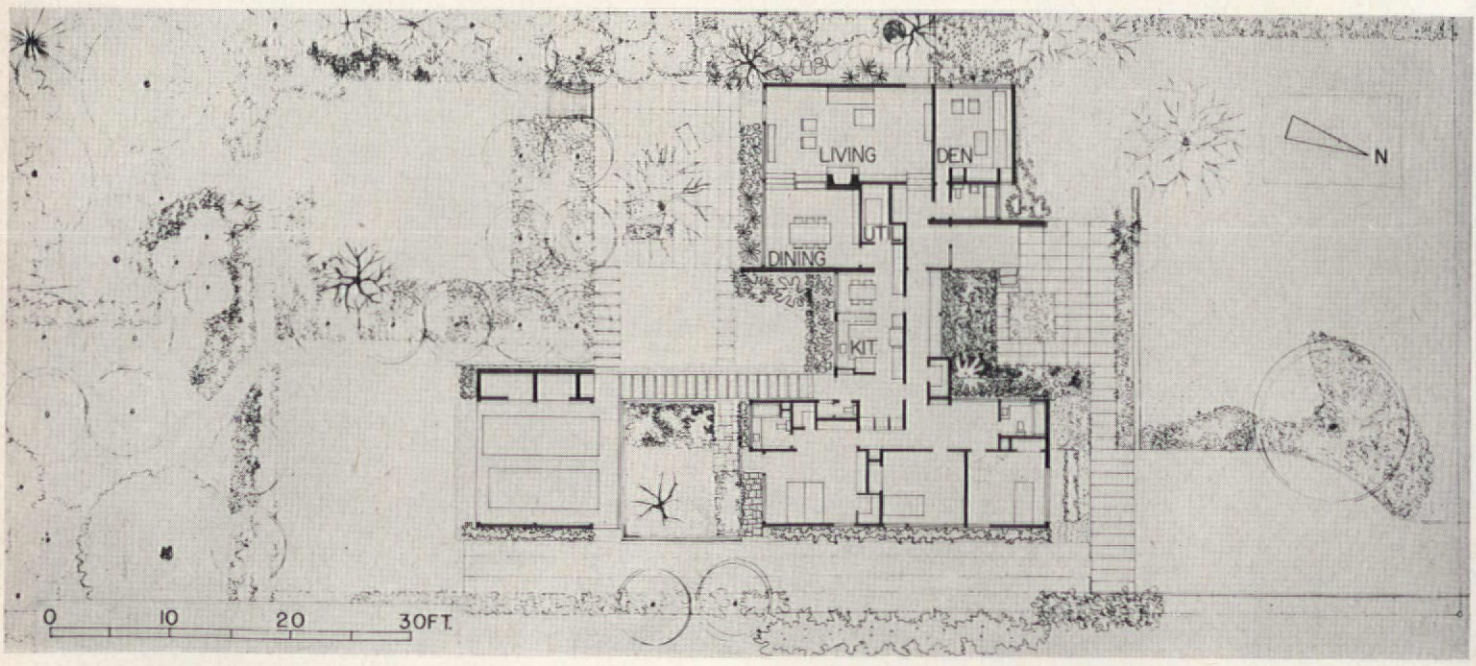


2. TRADITIONAL NEIGHBORHOOD AND





TREELESS LOT

The Samuel P. Baum Residence,
Montgomery, Alabama

Sherlock, Smith & Adams,
Architects
Charles M. Kelley, in charge

Edward L. Daugherty,
Landscape Architect

Bear Brothers, Contractor

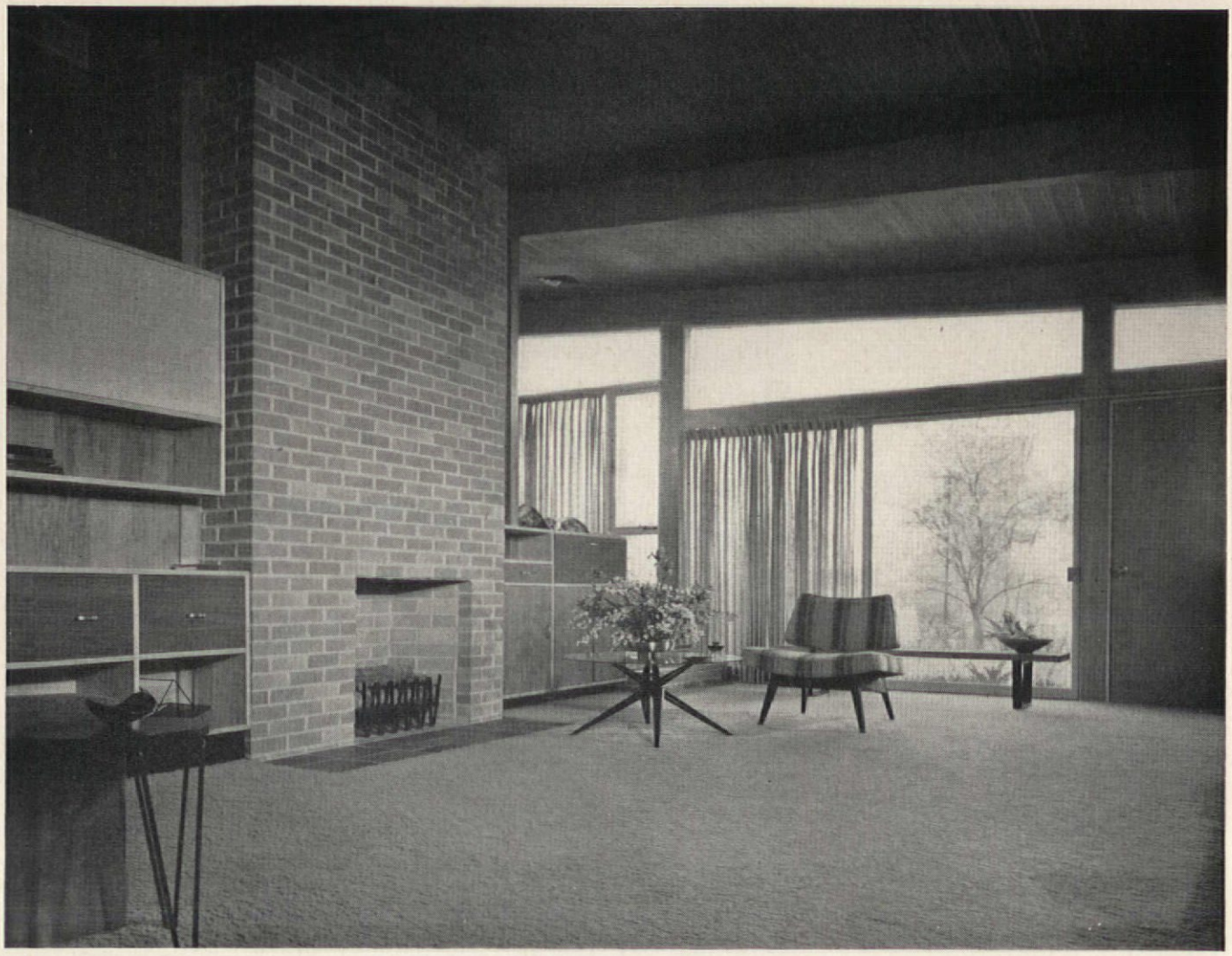
Joseph W. Molitor

LOCATED between two-story traditional houses in an established neighborhood on a plot devoid of trees, this house (see plan) makes the best of its situation. Principal rooms are located to face the south, or off-street portion of the site and to overlook a terrace and sunken garden. A deed restriction forbidding a garage "at the front of the house" led to removing the future carport south of the master bedroom to create a screened garden between.

The scheme stretches the living, service and sleeping zones across the plot; placing the kitchen between the other two zones makes it not only a noise buffer, but in addition a convenient control point for the children's indoor and outdoor play.

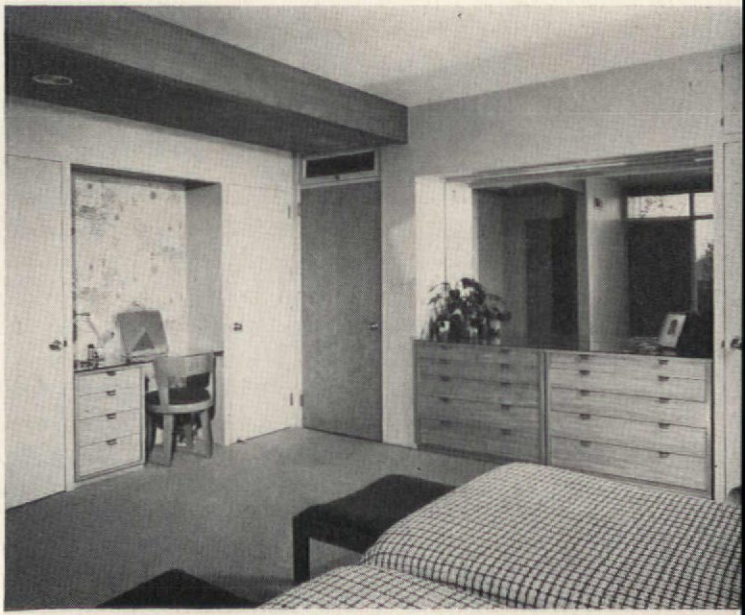
2. TRADITIONAL NEIGHBORHOOD, TREELESS LOT

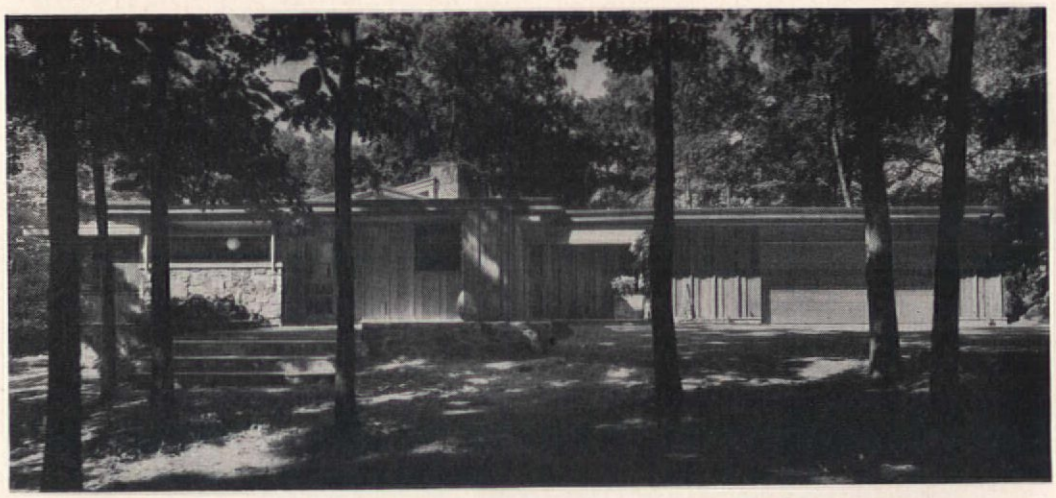
Sherlock, Smith & Adams, Architects



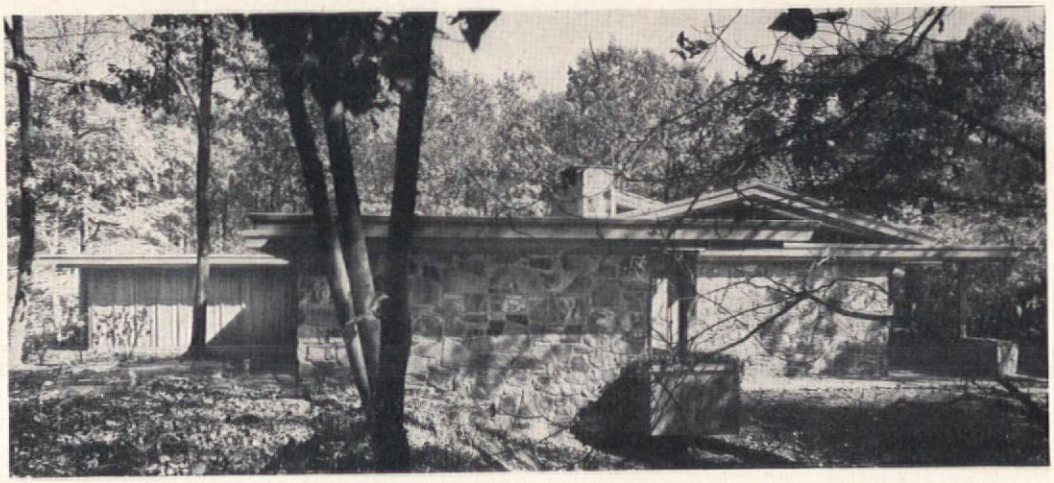
Both the living and dining areas orient south for privacy and winter sun, as does the master bedroom. Materials: pink brick, cypress in natural finish, painted plaster, striated plywood in natural finish; floors of carpet, plastic tile, oak, or flagstone.

Joseph W. Molitor





The elevation to the west is shown below. The east facade, above, is divided by the entrance loggia, at right



P. E. Guerrero

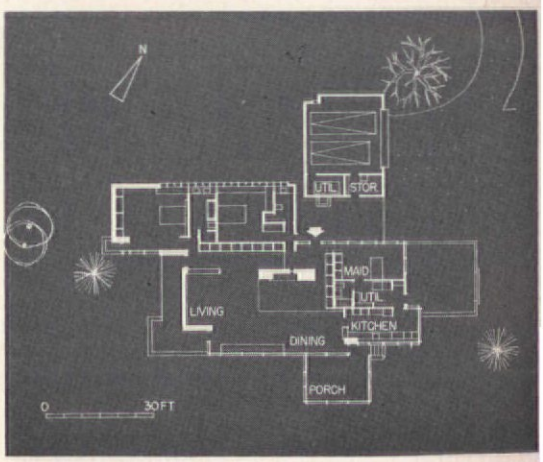
3. ON A ROCK LEDGE IN THE WOODS

The Fromkin House, Westport, Conn.
Joseph Salerno, Architect
James Fanning, Landscape Architect
Richard Goemann, Heating Engineer
Charles Cornell, Foreman

THE ARCHITECT put it quite well when he said, "The central idea was to do as little as possible to a beautiful site. Here was a rock ledge in a secluded area overlooking a small park of lovely trees to the south. Locating the house on the ledge required no study whatsoever; from the points of view of approach, elevation, view, orientation, and the best trees, there was no other possible location for it.

"All of the landscaping was executed with material that was already growing there or might have been. Hemlock, laurel and azalea are the basic plants, with vinca minor used as ground cover. There are no 'gardens' or 'lawns' in the usual sense."

The plan is essentially three more or less enclosed blocks disposed to define a large living area. The entrance is a court or loggia between these elements.

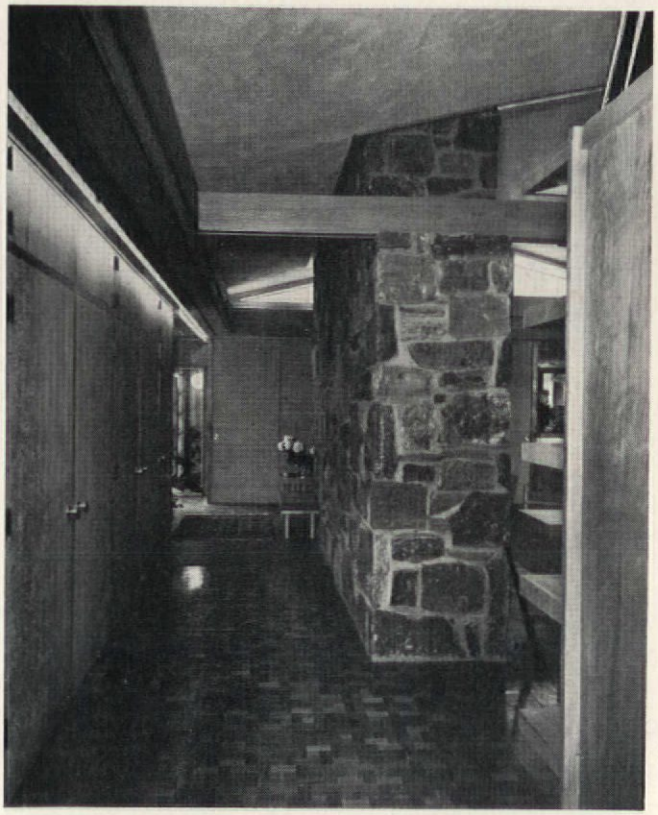


3. ON A ROCK LEDGE IN THE WOODS

Joseph Salerno, Architect

ARCHITECTURAL INTERIORS

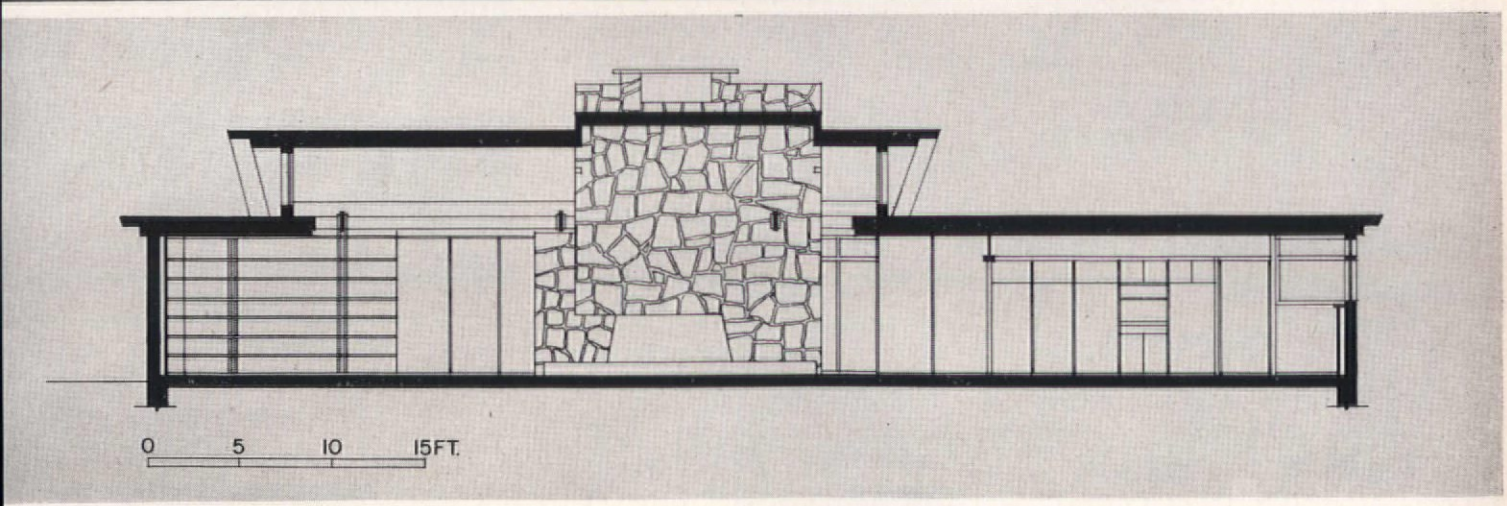
Design | *Details* | *Materials* | *Equipment*



P. E. Guerrero

For clearer spatial definition, the living room is subdivided by fireplace seating and the large mass of the fireplace and by built-in bookshelves. Such a scheme furnishes space for reading, music and also occasional large scale entertaining as well. The room seems comfortable whether it contains two or thirty. The considerable amount of natural light is supplemented by artificial light from incandescent tubes, which yields a pleasant effect. From any spot, one is constantly aware of the magnificent wooded view.

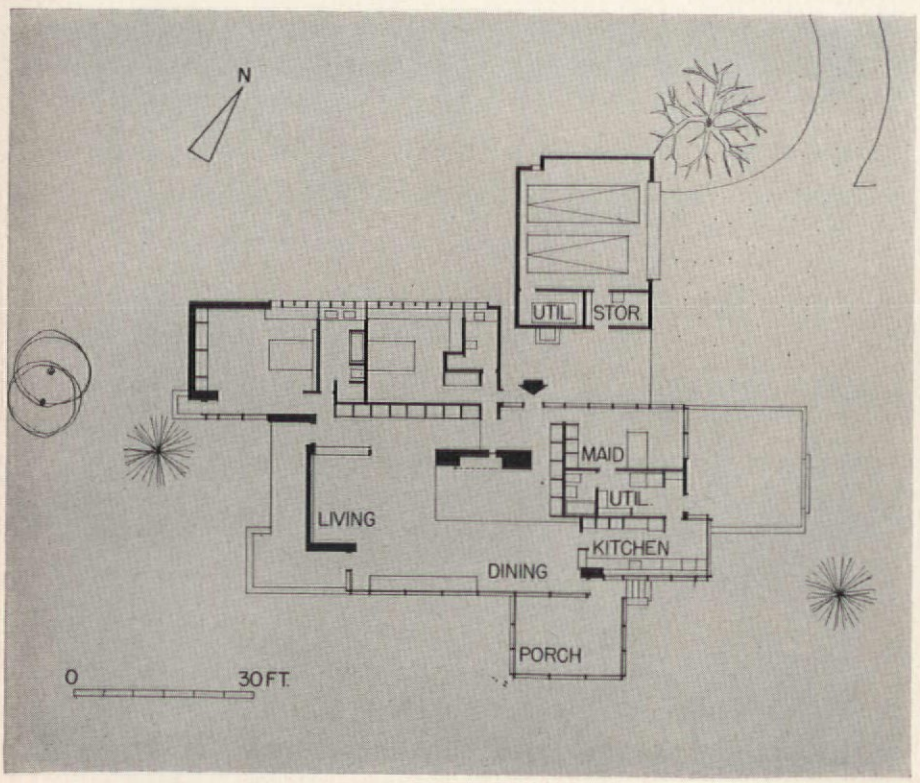
The pitched roof promontory above the living room both trusses the greater span and yields gable-end cross light



The added height sets the living area apart as a flexible, multi-use space which dominates the entire composition

3. ON A ROCK LEDGE IN THE WOODS

Joseph Salerno, Architect



The two photos, this page, look southwest to the park and southeast through the dining area to the porch

P. E. Guerrero

The kitchen, two views above, boasts windows to the south and southeast. Note especially the large number of built-in features in all areas of the house; this is true also in bedrooms, photograph below

BASIC ELEMENTS IN THE PLANNING OF ELECTRICAL SYSTEMS

By Felix B. Graham,
Chief of Electrical Department
Syska & Hennessy, Inc., Consulting Engineers

Article 2: Office Buildings

THE MAJOR CHARACTERISTICS of electrical distribution systems vary in relative importance, according to the type of building in which they are to be installed. Some of these were mentioned in the first article. Below is a list suggesting the sequence of importance for these characteristics in a multi-tenant office building:

1. **Safety (minimum hazard to life and property)**
2. **Flexibility**
3. **Reliability**
4. **Durability**
5. **Ease of maintenance**
6. **Low initial cost**
7. **Small space requirements**
8. **Appearance**
9. **Adherence to owner's standards**

Such a list cannot be hard and fast — it will have to be scrutinized and possibly adjusted for each case. The reasoning behind it is as follows:

(1) *Safety:* There can be no doubt that safety deserves uppermost consideration.

(2) *Flexibility:* Since the final space layouts usually have not been established at the time of design, and tenants' requirements change frequently throughout the life of a building, the electrical system must be designed so that changes and additions can be made with a minimum of cost and inconvenience.

(3) *Reliability:* Interruption of electrical service causes great inconvenience and loss of time and work. Fortunately, most large office buildings are located in areas supplied from dependable network systems of power companies. Where this is not the case, multiple power services and partial-load, stand-by power plants may be advisable.

(4) *Durability:* The importance of durability varies with accessibility and anticipated length of service. For example, conduit buried in a concrete slab must be of very good quality. But a switchplate located in a space which is likely to change in a few years need not be the most durable type.

(5) *Maintenance:* Ease of maintenance also comes ahead of initial cost. A slight increase in cost for more easily maintained equipment is usually made up many times in savings on upkeep and repair.

(6) *Initial cost:* Naturally this must be carefully considered, but it should not be overemphasized. Electrical work accounts for 10 to 15 per cent of the total cost of an office building. Lighting fixtures are a very small portion of the total cost of the building, regardless of the quality of the lighting system. Yet, fixtures are usually among the first items to get the axe.

(7) *Space Requirements:* Since every square foot of rentable area is a potential source of income, the system should use as little rentable space as possible. However, overcrowding limits accessibility and future expansion, and it causes excessive heat to build up, reducing equipment life.

(8) *Appearance:* This is oftentimes of lesser importance than initial cost, because most of the electrical work is either concealed within the structure or in mechanical spaces.

(9) *Standards:* When working on government projects, the electrical designer must adhere to established rules and standards.

What Does the Owner Install?

The extent of the initial electrical installation in an office building is governed by its type. There is the multi-tenant building, erected with a minimum of electrical equipment. In this case the owner may provide only the most basic distribution system and ceiling outlets. The tenant then must install his own fixtures, under-floor duct, receptacles, and all those other items enumerated in the chart following the text.

Or it may be that the owner of the multi-tenant building installs under-floor duct, fixtures, receptacles, clocks and similar items.

It is the one-tenant building, exemplified by the home office building of a large company, where all requirements must be thought of, designed and installed initially.

Lighting still is assumed by some to be the principal element of the electrical system. This is far from the case. The chart shows what a comparatively small portion of the whole system it is, in terms of all functions, but not, of course, power consumption.

This is not meant to underrate the role of lighting.

Lighting

Specifically, here are lighting recommendations for typical office building areas:

FOOT-CANDLE LEVELS	
General office work	30–35 ft-c
Accounting, bookkeeping, business machines	40–50 ft-c
Drafting	60–70 ft-c
Inactive files, reception room, active stairways, washrooms, service areas, corridors	10–15 ft-c
Infrequently used hallways, corridors	5–10 ft-c

For the lighting to be comfortable, the installation should be designed not to exceed the brightness ratios recommended by the Illuminating Engineering Society. These are as follows:

BRIGHTNESS RATIOS	
Between task and adjacent surroundings	3 to 1
Between task and more remote surfaces	10 to 1
Between luminaires or windows and adjacent surfaces	20 to 1
Elsewhere between objects within the normal field of vision	40 to 1

Brightness of fixtures should not exceed these values expressed in foot-lamberts:

FIXTURE BRIGHTNESSES	
From 3 to 30 deg above horizontal	225 to 450 max
From 30 to 45 deg above horizontal	450 to 900 max
From 45 to 90 deg above horizontal	1000 to 2300 max

(A bare fluorescent lamp has a brightness of about 1800 foot-lamberts)

Interiors should be finished to attain the following reflectances:

ROOM AND FURNISHINGS REFLECTANCES	
Ceiling	.80+15%
Walls	.50±15%
Furniture	.35±25%
Office Machines and Equipment	.35±25%
Floors	.35±25%

Spacing for even illumination depends on the type of fixture and varies from 50 to 125 per cent of mounting height or ceiling height.

Underfloor Distribution

Requirements for power and communications throughout the office area can be supplied with flexibility by underfloor duct or cellular steel raceways.

Underfloor duct systems are comprised of individual ducts spaced ideally at such intervals that no matter where a desk is placed, part of the desk is over a duct run. In most ducts, there are preset inserts on 2-ft centers, which are covered by the finish floor. Wires are fished through the ducts from junction box to junction box — which are 20 to 60 ft apart. When there is need for a receptacle, a receptacle standpipe is installed.

Depending on the anticipated needs, a system has one, two or three ducts; one duct for telephone, one duct for 120-v power, and one duct for signal and communication wires. Perpendicular to the distribution ducts run the feeder ducts which connect to the lighting panelboards or telephone splice cabinets, either directly or through conduit.

Insufficient connections from underfloor ducts to telephone cabinets can be a bottleneck, and therefore should be provided in generous quantities. Also, the various splice boxes on one floor should be interconnected for greatest flexibility.

With cellular steel floor, the whole floor is a series of raceways. The cells can be used for electric, telephone and signal wires as well as for lighting outlets on the ceiling below — with limitations of accessibility from below. Outlets can be set almost anywhere in the floor.

The Electrical Load

Modern office buildings require from 5 to 7 watts per sq ft without electrically driven refrigeration compressors or 7 to 9 watts per sq ft with compressors of this type. One-half or more of this demand is power. The building utilities include: (1) elevators, (2) moving stairways, (3) air conditioning, (4) ventilation, (5) heating pumps, (6) boiler room auxiliaries, (7) fire pump, (8) air compressors. Additional equipment is shown on the accompanying chart.

Elevator motors are as large as 75 hp. Adjacent elevators should be supplied by feeders that can work as alternates: in case of a feeder failure, the passengers in the affected car can be brought to safety by means of the adjacent car.

Electrically driven refrigeration compressor motors usually take more power than any other equipment. Some of these motors have been as high as 1500 hp. Starting equipment for such large motors must be specially designed to limit the inrush of current to a level which will not affect excessively the voltage on the remainder of the electrical system.

Chilled water and condenser water pumps, cooling tower fans, and air circulating fans account for a large portion of the electrical load. Some air conditioning systems employ window units with electrically powered fans. These fans have a rating of only $\frac{1}{20}$ or $\frac{1}{12}$ hp. But the motors have an inherently low power factor and low efficiency, so that where several hundred of such window units occur in one building, the feeders supplying these small units can be very large.

High Voltage Systems

To distribute such large magnitudes of current requires large amounts of copper. The greater the current, the more the copper. For a given load, if the voltage is doubled, the current and, therefore, copper requirements are cut in half. This is the reason for the recent trend to higher voltage distribution and utilization in large buildings. The most common new system is referred to as the 265/460 v or 277/480 v system.

This system is similar to the customary 120/208 v system in the method of connection. Voltage between any two phase wires is 480 v, and between any phase and neutral, 277 v. Motors are connected three-phase, 480 v; lighting, single phase, 277 v. Only fluorescent or mercury vapor lighting is suitable for 277-v operation.

Lighting at 277 v has been used for some time in industrial plants where the major part of the load consists of 480-v power spread all over the plant. The relatively minor 120-v requirements are supplied through local 480/120-v transformers.

The prime advantage of a high voltage system is that, with 480-v distribution, it requires less than half of the copper used in a 208-v system, which in turn reduces conduit sizes. No increase in conductor insulation is required since standard building wire insulation is rated at 600 v. Conductor sizes are, in addition, kept small by the lesser voltage drop of the high voltage system, making it particularly suitable where long feeders are involved.

On the other hand, a 480/277-v system introduces into the building two or three additional voltages, and, with them, different equipment and some complications. Three phase motors will operate on 480 v. Fractional horsepower motors need 120 v. Fluorescent lighting operates on 277 v, incandescent lighting on 120 v. Electrically operated office equipment requires 120 v for smaller sizes, 208 or 220 v for the heavier machines. All receptacle and underfloor duct outlets supplying the multitude of local appliances used in a modern building must be connected to a 120-v system, which is the voltage at which the auxiliaries, such as clocks, fire alarms, communications and similar systems are supplied.

A recent development which enhances the use of a high voltage system is the local switch for 277-v operation, similar to that now used for 120 v.

Communications and Alarms

For the telephone system, the owner's responsibility is to provide outlets, empty raceways and splice boxes. Telephone instruments, wires, cables and all connections are provided by the telephone company.

When a fire alarm system is installed, it must be audible everywhere within the building. Fire alarm stations should project out from the wall so that they can be seen in long corridors. Gongs may be recessed in partitions, if desirable, for appearance. The supervisory trouble bell should be located in a space where someone is present at all times, so that if any part of the mechanical system fails, it can be investigated and corrected without delay.

Watchmen's tour systems are available in two types — wired and non-wired, the latter being more common.

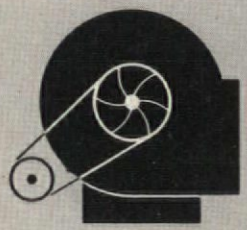
Clocks may be the complete master type with self-regulation, or the type without self-regulation. Three basic master systems are available: (1) minute-impulse, wired; (2) synchronous, wired; and (3) synchronous, electronically controlled.

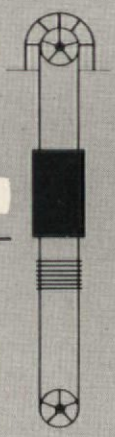
For a chart outlining office building electrical systems, please turn the page ➔

BUILDING UTILITIES

AIR HANDLING

Supply Air Fans
Return Air Fans
Garage Exhaust Fans
Toilet Exhaust Fans
Window Air Conditioners



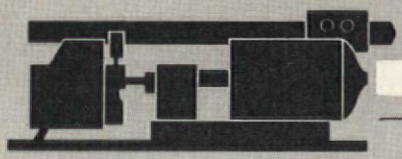


TRANSPORTATION

Elevators
Moving Stairways
Dumb-waiters
Conveyors
Hoists
Door Operators

COOLING

Refrigeration Machine
Condenser Water Pump
Chilled Water Pump
Cooling Tower

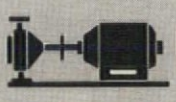


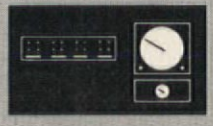
MAINTENANCE

Central Vacuum Cleaning System
Incinerator
Waste Paper Baler and Hoist
Shop Machinery
Floor Machines

WATER CIRCULATION

Domestic Water Pumps
Hot Water Circulating Pumps
Sump Pumps
Ejector Pumps
Fire Pump
Sprinkler Pump
Chilled Drinking Water Pumps



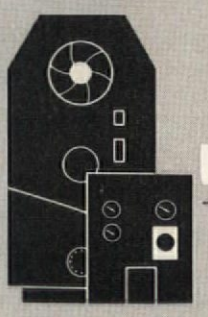


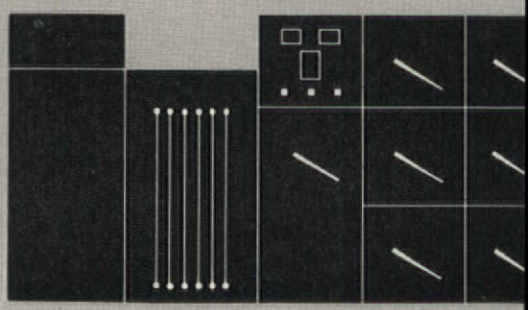
EQUIPMENT CONTROL AND ALARMS

Remote Control and Indicating Board
Air Compressors
Temperature Indicating System
Sump Pit
Ejector Pit
House Tank
Cooling Tower Water
Steam Pressure
Elevator
Air Duct Smoke and Fire

HEATING

Oil Burner
Oil Heaters
Fuel Pumps
Stokers
Forced Draft Fans
Induced Draft Fans
Boiler Gauge Lights
Emergency Shut-off
Snow Melting System
Liquid Pumps
Electrical Cables





BUILDING FUNCTIONS

OFFICE EQUIPMENT

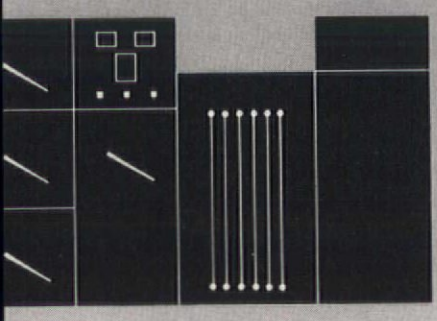
Desk Lights
Local Fans
Dictating Machine
Central Dictation System
Electric Typewriters
Calculating Machines
Addressographs
Water Coolers
Postage Meters
Business Machines, e.g.
  Punched Card Sorter
  Electronic Statistical Machine
Printing (Blueprints, etc.)
Microfilm Viewing Apparatus

MISCELLANEOUS

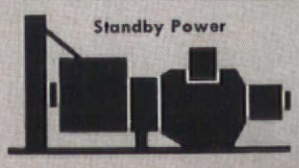
Building Lightning Protection
Tenants Requirements (food service equipment, lighting, air conditioning, etc.) for:
  Drug Store
  Restaurant
  Bank
  Gift Shop
  Tailor Shop
  Newsstand, etc.
Vending Machines

SECURITY ALARMS

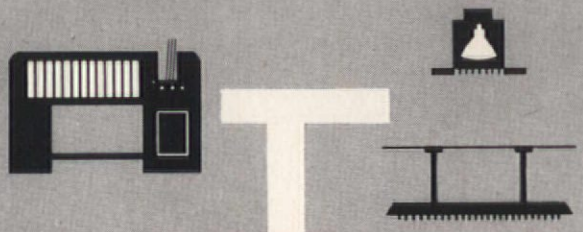
Watchman System
  Central, wired
  Portable, non-wired
Burglar
Hold-up
Exit Door
Fire
Sprinkler
Garage Air Carbon Monoxide
Fire Standpipe Signalling



Incoming Electrical Power
Transformers
Network Protectors
Main Switchboard
Metering Equipment
Transformer Vaults



Standby Power



LIGHTING

General Lighting
Architectural Lighting
Signs
Obstruction Lighting
Building Flood Lighting
Stairs
Exits
Sidewalk Lighting
Emergency Lighting

COMMUNICATIONS

Telephone
  Main Terminal Room
  Switchboard Room
  House Cables
  Terminal Boxes
  Individual Wires to Phones
  Instruments
Leased Lines for:
  Teletype
  Time Signals
  Stock Market Tickers
  Central Station Alarms
TV Master Antenna System
Inter-Office Communications

SOUND

Wired Music
Public Address System
Paging

TIME

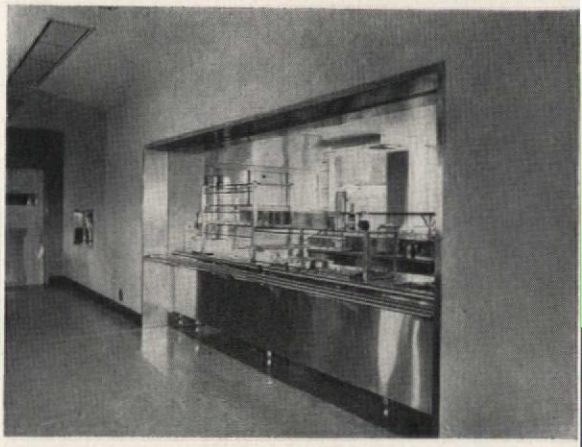
Clock System
  Master Clock
  Individual Clocks
  Dismissal Signals
  Attendance Recorders
  Time Stamps

TWO DEVELOPMENTS IN HOSPITAL EQUIPMENT AND CONSTRUCTION

1. Institute of Physical Medicine and Rehabilitation, New York University — Bellevue Medical Center, New York City, Skidmore, Owings & Merrill, Architects

2. Jackson-Madison County General Hospital, Jackson, Tennessee
J. Frazer Smith & Associates, Architects & Engineers

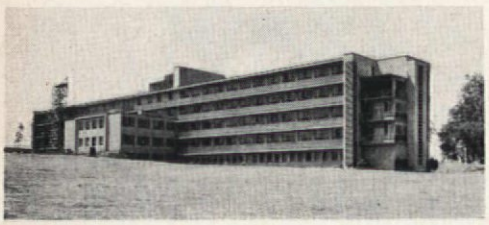
1. Equipment for the Disabled: Architects



Acme Newspictures

As the first of its type, the Institute of Physical Medicine and Rehabilitation has become a prototype for similar centers over the world. It was conceived by its director, Dr. Howard A. Rusk, and designed—including the special equipment shown here—by the architects in collaboration with Dr. Rusk. • The cafeteria serving table, made almost entirely of stainless steel,

2. Dry-Wall Construction: Architect gave contractor option of using two-ply gypsum



DURING THE PLANNING stages of this hospital, there was an acute shortage of plasterers in the area where it was to be built. So the architect wrote the specifications giving the general contractor the option of using 2-ply gypsum wallboard instead of plaster on nearly all of the walls and ceilings in the 125-bed hospital. The contractor chose dry-wall construction, and this hospital is believed to be the first to have used it. This was four years ago, and, now, dry wall has been used again in the hospital's new 75-bed wing.

The architect, Frazer Smith, has two reasons for giving the contractor the option of using dry wall or plaster: (1) he doesn't want to bar plaster if the contractor finds it more economical, and (2) he feels that either lath and plaster or 2-plys of 3/8-in. gypsum wallboard are satisfactory for an institutional building.

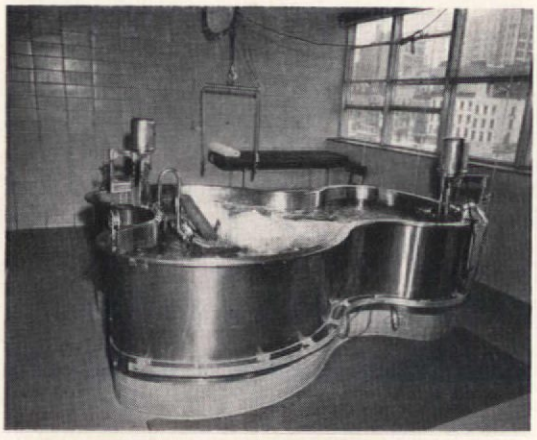
Hedrich-Blessing

Crew nailing first layer of gypsum wallboard to wood studs. Layers are each 3/8 in. thick

Spreading adhesive over back of face layer, which will be applied in vertical strips over first layer

vork with a doctor and manufacturers in its design

easily accessible to both wheel chair patients and employees. he entire unit can be moved, if necessary, during cleaning. Telephone booths, 3 by 5 ft, serve standard use and also llow wheel chair and stretcher patients easy access. Interiors re surfaced with perforated stainless steel acoustical liners. The stainless steel shower chair, designed by the architects and



Dr. Rusk, is arranged so that wheel chair patients can be seated with minimum effort; after it is swung into the shower stall, it can be locked in place. • A stainless steel Hubbard-Currence tank is used in hydrotherapy. The tank rests on a tile base to aid sanitation. • A smaller tank, constructed entirely of seamless welded, stainless steel, is used for arm therapy treatment.

panels

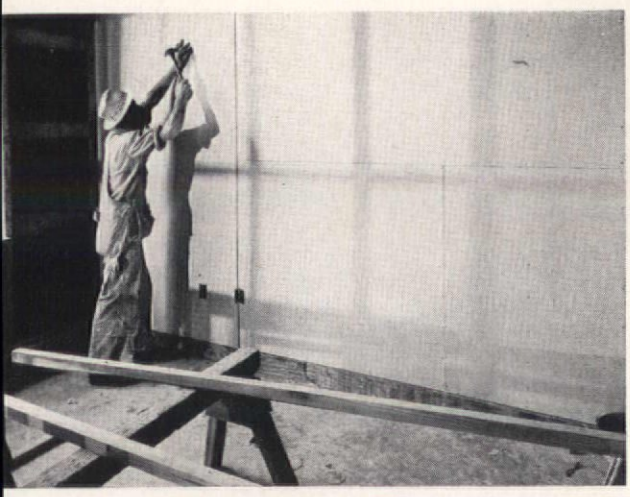
The 2-ply gypsum wallboard, which is used in all the patient nursing areas, all administrative areas, the dietary area and parts of the diagnostic and treatment areas, is said to meet fire-resistive requirements for this type of occupancy. When applied over wood studs, 2-plys of $\frac{3}{8}$-in. gypsum board provide a 1-hr rating.

Some plaster was used in the original hospital, but it is a specially formulated type used in the X-ray room for protection against radiation.

In the corridors and other areas where sound control is important, suspended-type acoustical tile was specified. In service areas and other areas subject to abuse, the specifications called for the application of cement asbestos panels over a $\frac{1}{2}$-in. gypsum wallboard base.

In addition to this hospital, the contractor also chose dry-wall construction for the Obion County General Hospital in Union City, Tenn.; the Le Bonheur Children's Hospital in Memphis; and the Sherwood Forrest and Kansas Street Schools in Memphis.

The economy of 2-ply gypsum wallboard was demonstrated, according to Frazer Smith, by the fact that it was chosen almost invariably by the contractor when he was given the option.



Temporary nailing of face layer. Minimum nailing holds panel until adhesive develops adequate bond

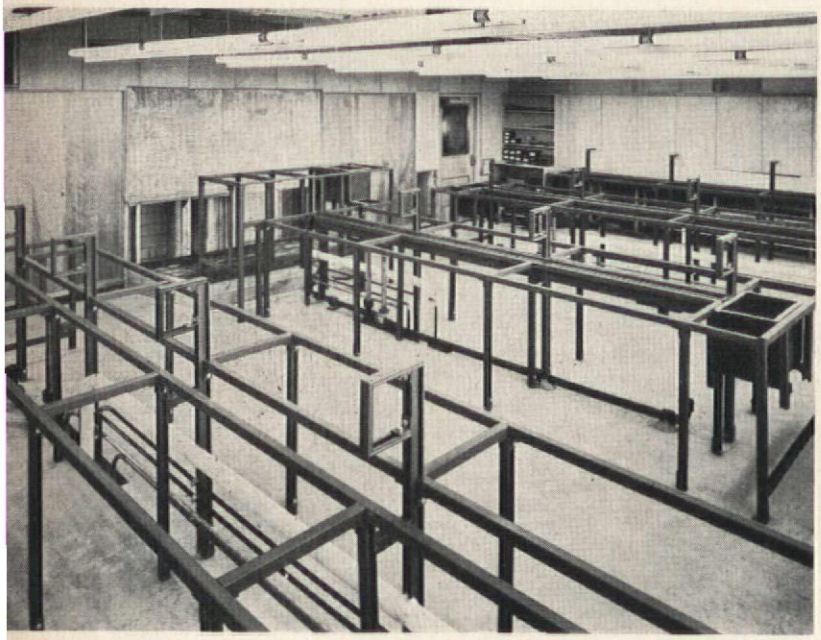
Installing cement asbestos panels over wallboard in corridor

Metal runner for ceiling is installed with powder-actuated tool

1.

2.

1. Graduate lab in use 2. Basic framework for double width, four unit bench with sink and lead-lined wood drain in place 3. Details of framework. Top and drain in place 4. Overall view framework for 30 students elementary lab. Raised section in middle background is instructor's desk



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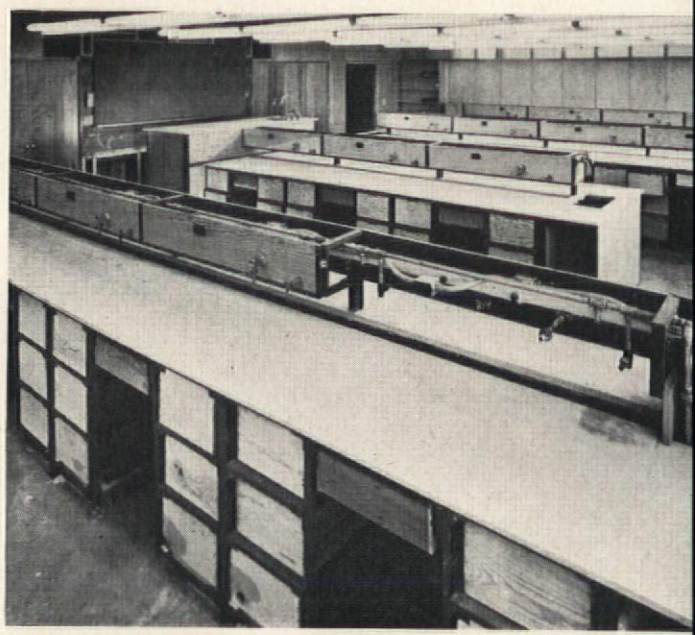

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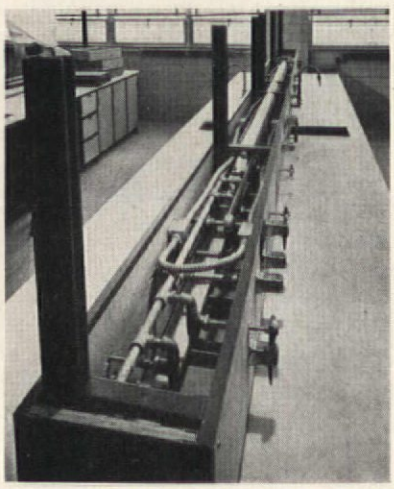
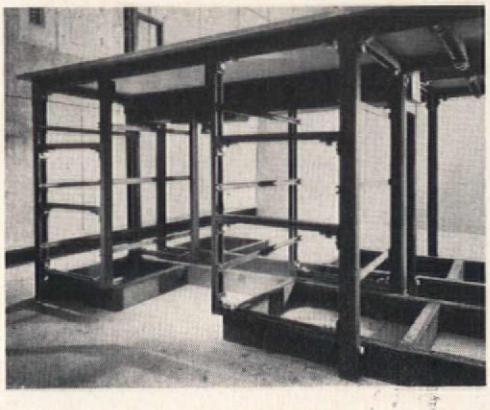


7.

8.

9.

CHANNELS FORM FRAMEWORK FOR LAB FURNITURE



3.

6.

5. Partly finished elementary lab 6. Completed elementary lab 7. Utility lines in raceway above center bench 8. Graduate laboratory showing shortened unit service as base for open face hood 9. Close up of cabinet arrangement

Unistrut, U-shaped channels of various weights and a variety of flat and angle connecting fittings, has been put to a new use — framework for lab furniture. *Unistrut* was chosen by the designer, Raymond C. Dragoo Jr., assisted by Dr. Kenneth C. Cook, chemist and Richard N. Kuhlman, University architect, to meet the requirements set by the Chemistry Department of the University of Oklahoma: suitability for present needs and ease of alteration.

The basic feature is an independent, demountable steel framework with all other components, attached to the framework with screws or bolts, separately removable. Utility lines are attached to one member only of each bench unit.

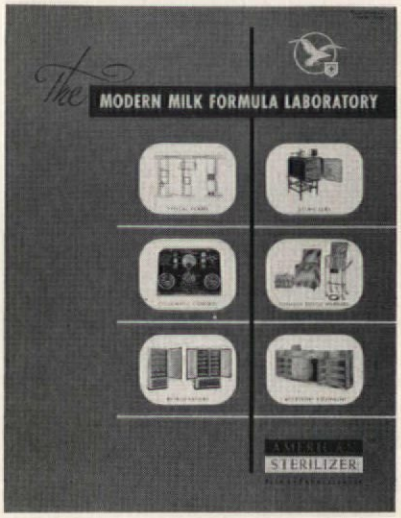
The units, which were constructed by the Department of the Physical Plant under the direction of W. W. Kraft, are tied together with continuous channels at the top legs. This permits building the tables in multiples of a standard unit; at the same time, units may be constructed any length desired and may be joined with the same rigidity as if the whole bench had been built as a unit.

Utility lines are attached by pipe clips to one leg that extends above the table top in each 54 in. unit. They are carried inside the 7- by 7-in. cantilevered support at the top of this leg. Reagent shelf and aprons are attached to the same support. Steam, cold-water, gas, compressed air and a-c current lines are carried on all benches in a uniform pattern. Additional outlets can be installed without altering present lines.

Wooden cupboards are fabricated and painted, then placed in the framework and fastened with screws. Drawer gliders of lightweight steel channel attached to a frame member are adjustable.

Exposed wood members are ¾-in. plywood, banded with steel channels. Panels are attached through the metal banding to the steel frame members. Desk tops are ¾-in. cement-asbestos board. *Unistrut Products Co., 1013 W. Washington Blvd., Chicago 7, Ill.*

(Continued on page 222)



Right: Illustration of new catalog on equipment for hospital milk formula laboratories

HOSPITAL EQUIPMENT

The Modern Milk Formula Laboratory Publication C-12OR3 is a new catalog describing the American plan for the modern milk formula department. Small, medium and large hospitals are discussed. Architectural layouts and cross sections are used in two-page spreads which clearly describe each class of hospital. In addition, such equipment as formula sterilizers, bottle warmers, bottle carriers, refrigerators, workcounters, washing units, and other accessory equipment are described. 24 pp, illus. *American Sterilizer Co., Erie, Pa.*

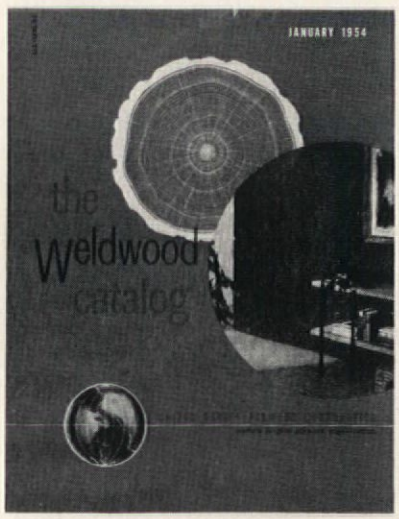
PLYWOOD

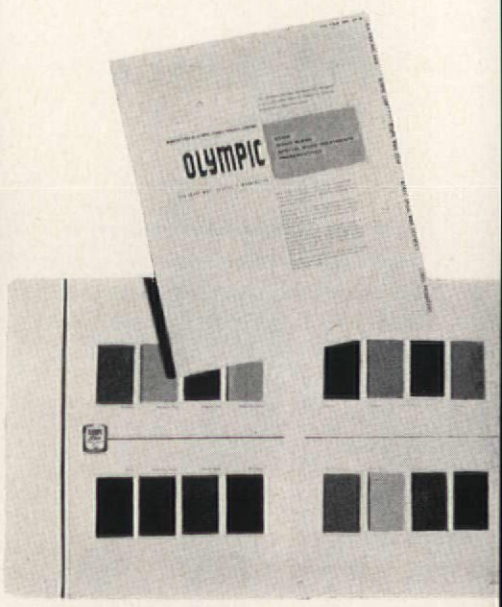
The Weldwood Catalog introduces several of the new product developments including Surfwood, a decorative panel with the texture of old driftwood and Armoply Chalkboard, a different metal-on-plywood material designed for use as a writing surface for chalk. The booklet contains factual descriptions, recommendations, sizes and approximate prices for every product in the *Weldwood* line. 12 pp, illus. United States Plywood Corp., 55 West 44 St., New York 36, N. Y.*

WOOD STAINING

Olympic AIA File No. 25-B contains descriptive and application data on a number of Olympic products made especially for California and Western red cedar exteriors. Actual wooden chips for each of the 16 *Olympic* stain colors are mounted in the file folder.

In addition, there is a section of informational material in the same file on Olympic wood blend, developed to accent the grain of all smooth surface woods. Wooden chips illustrating each of the six colors and the clear shade are mounted in that section. 14 pp, illus. *Olympic Stained Products Co., 1118 Leary Way, Seattle 7, Wash.*





Two catalogs on finishes: new stains, plywoods

CODE CALL SYSTEMS

New *Code Call Systems* tells of the advantages, features and operation of Wheelock Code Call Signals. Diagrams for high or low voltage systems and for duo-potential systems are included. 6 pp, illus. *Wheelock Code Call Signal Engineering and Mfg. Co., 154 W. 14 St., New York 11, N. Y.*

ELECTRONIC AIR CLEANERS

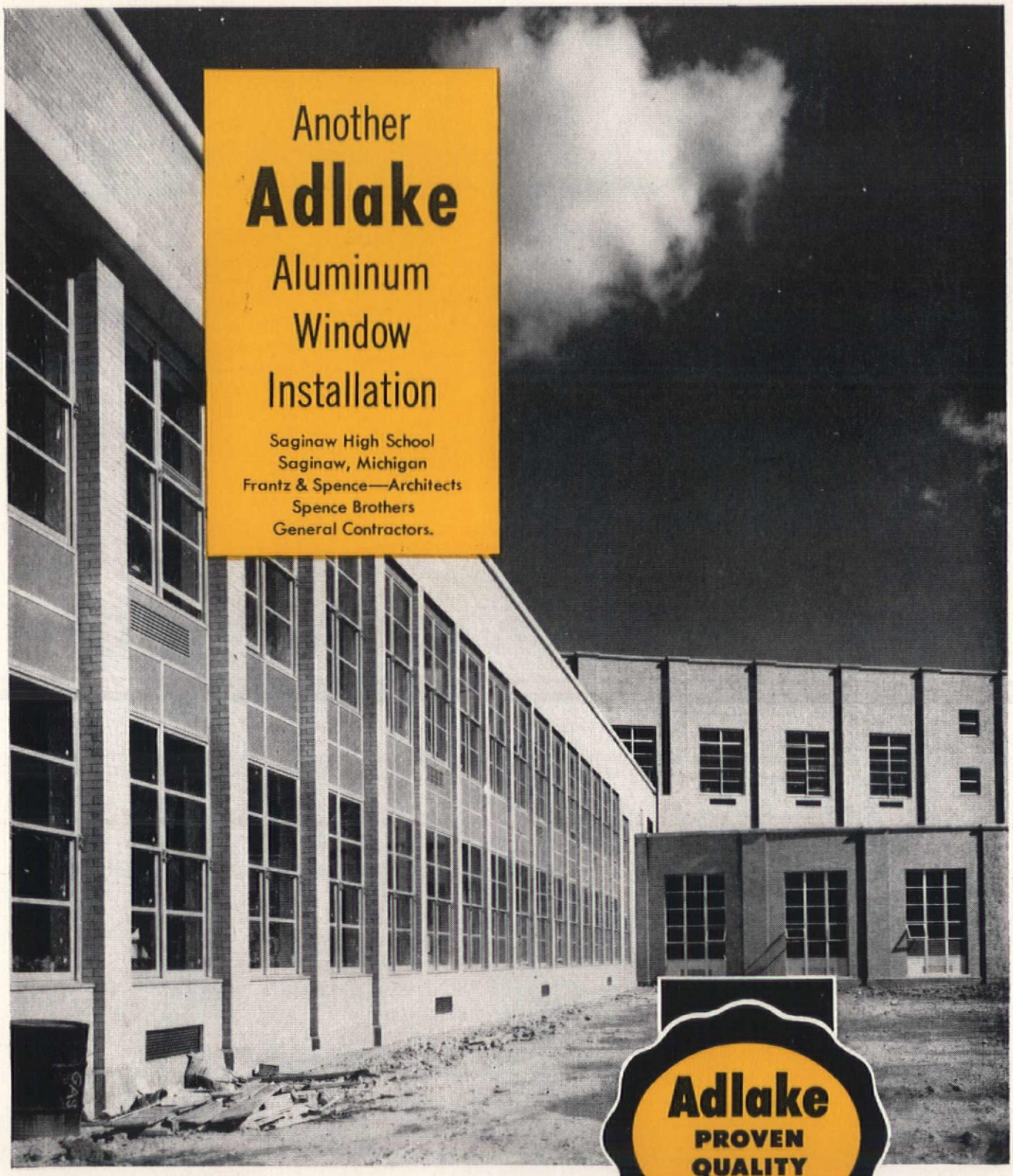
Trion At Work, Study No. 109. Booklet describes application, requirements and benefits. Examples of usage are shown through photographs and description of the Alcoa Building, where the product is applied throughout. 4 pp., illus. *Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.**

COLORING CEMENT

Horn AE Dispersed Black is a brochure describing a scientifically formulated carbon black dispersion, used for the darkening of air-entrained or regular concrete in either monolithic or topping construction. This brochure gives testing procedure, data on mixes, compressive strength, flexural strength and uses of the product. 6 pp, illus. *A. C. Horn Co., Inc., Long Island City 1, N. Y.**

(Continued on page 276)

Other product information in Sweet's Architectural file, 1953



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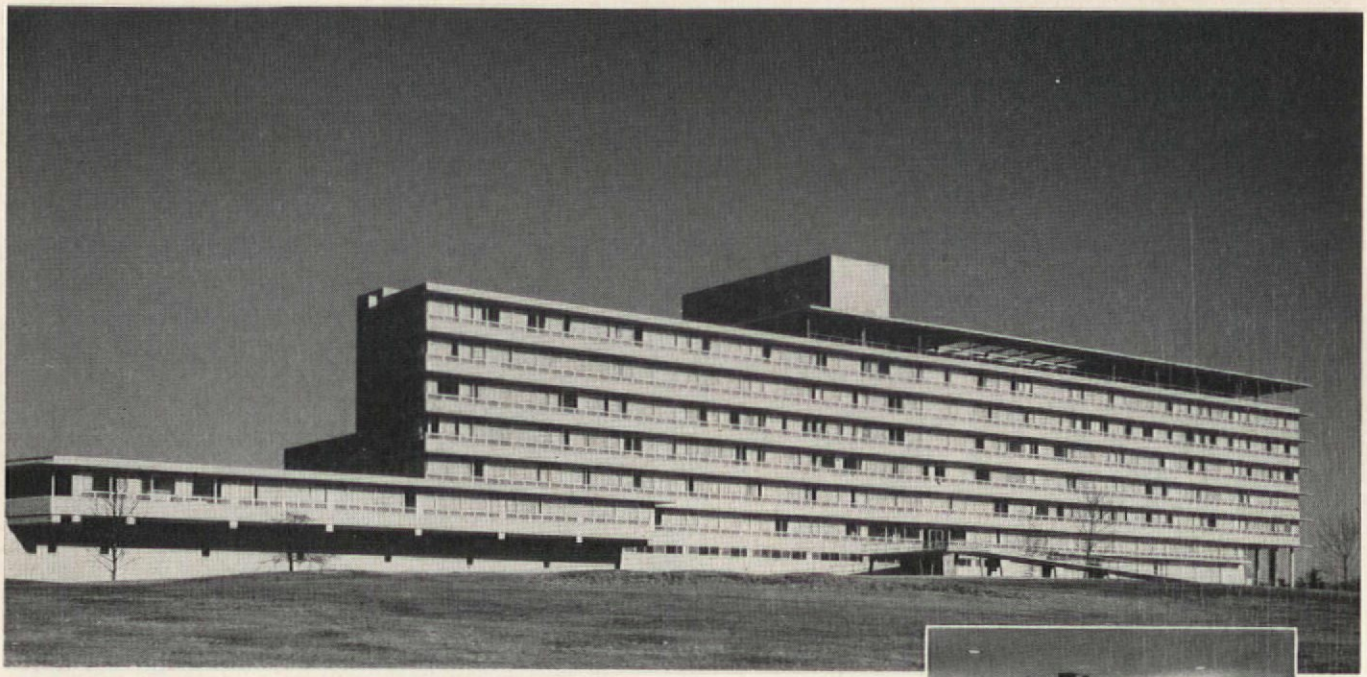
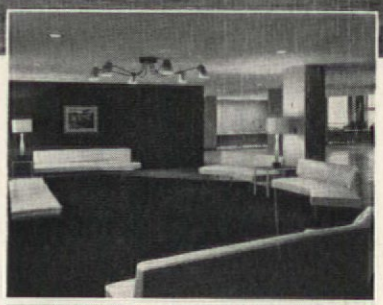


The New LANKENAU HOSPITAL, Overbrook, Pennsylvania
ARCHITECT: Vincent G. Kling • GENERAL CONTRACTOR: Wark & Co. • PAINTING and DECORATING: Charles Shaid



Photos, Lawrence S. Williams, Havertown, Pa.

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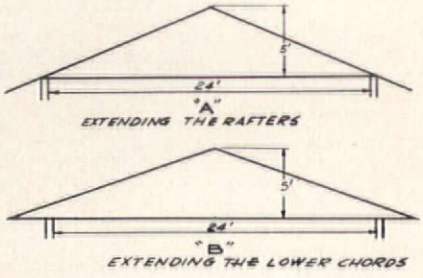
SIMPLIFIED FRAMING METHODS—6: Trussed Rafters

Presented through the cooperation of the National Association of Home Builders Research Institute

The following pages are extracts of "Trade Secrets Report No. 2" prepared for the N.A.H.B. Research Institute under the direction of Leonard G. Haeger, with Lee Frankl, Consultant. The report stresses economies of using trussed rafters in houses, and is based on the following:

1. To use basic engineering data for the design of trussed rafters.
2. To pre-cut truss members from smaller sizes of lumber. To pre-assemble trusses on the site, or to purchase complete truss units—if economical and if deliveries are arranged to a construction schedule.
3. To use trusses so as to increase flexibility in the design of interiors for a basic slab or basement plan, and installed as A or B at right.

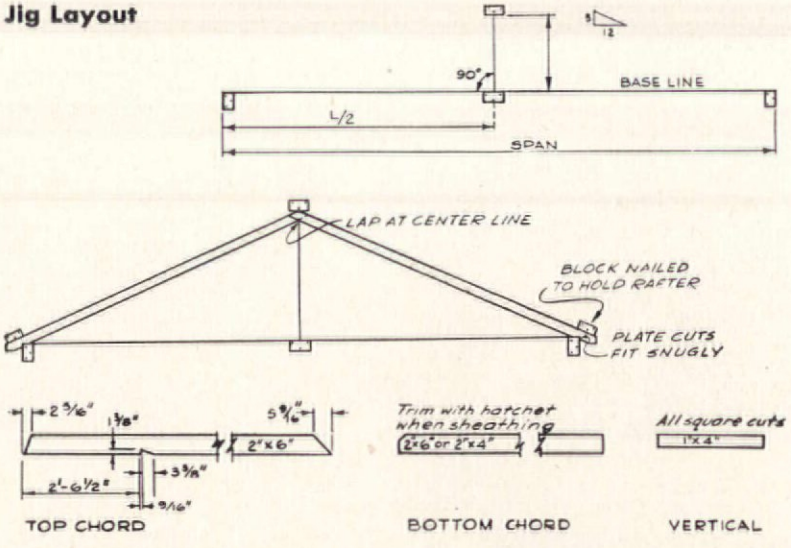


King Post Truss

The simplest of all truss designs, the King Post Truss, consists of rafters and ceiling joist with a fourth member connecting the peak and the joist and at right angles to the joist. It is recommended for spans up to 20'–8" outside to outside of supporting walls, and spaced 2'–0" o.c.

This truss design was used in the "Industry Engineered Homes Program" sponsored by the Producers' Council and the National Retail Lumber Dealers Association. The research program and the construction of 6 houses using a 16'–8" span was carried out by the Small Homes Council of the University of Illinois under the direction of James T. Lendrum. Since then, the Small Homes Council has developed additional data described here.

Jig Layout



Measure and snap chalk base line on subfloor. The length is outside to outside of supporting walls. Mark center lines at right angles to base line. The length of the center line is governed by a 5/12 pitch. Material must be 1100 p.s.i. stress grade or better. This is equivalent to coastal region douglas fir #2.

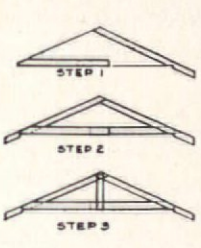
Place built-up jig blocks, at ends and centers, of base line at the peak. Cut one pair of top-chords—see member size table. Place chords with notches fitted over jig blocks. These chords lap precisely over center line at peak; the plate cuts must fit snugly on jig blocks. Place two more jig blocks above rafter heels—above plate cuts.

Check all cuts on top chords. When correct use as a pattern.

Cutting Diagrams

Assemble truss members in the following order. Lay right top chord and left bottom chord in jig. The left top chord and right bottom chord are then placed. They lap the first two chords placed. Finally the vertical post is placed.

Nail according to schedule.



*Member lengths are for 30" overhang. Change is needed.

MEMBER SIZE TABLE

SPAN (o.r. to o.r.)	16'-8"	17'-0"	17'-4"	17'-8"	18'-0"	18'-4"	18'-8"	19'-0"	19'-4"	19'-8"	20'-0"	20'-4"	20'-8"	
TOP * CHORD				2-2"x6"-14's						2-2"x6"-16's				NO ATTIC STORAGE
BOTTOM CHORD		2-2"x4"-10's					2-2"x4"-12's							
VERTICAL	1-1"x4"-4'						1-1"x4"-5'							
TOP * CHORD			2-2"x6"-14's							2-2"x6"-16's				ATTIC STORAGE
BOTTOM CHORD	2-2"x6"-10's					2-2"x6"-12's								
VERTICAL			1-1"x4"-5'											

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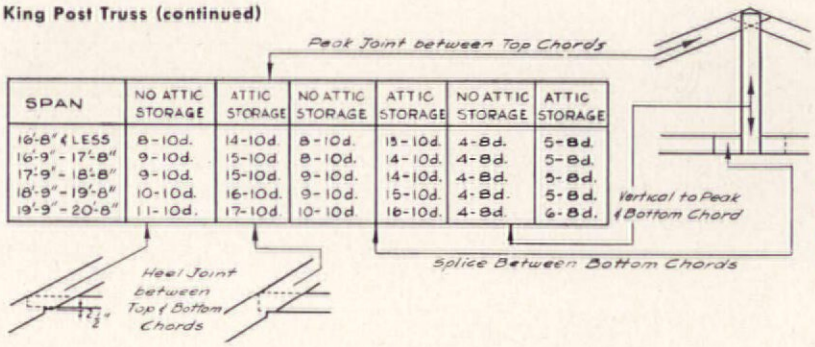
SIMPLIFIED FRAMING METHODS—7: Trussed Rafters

Presented through the cooperation of the National Association of Home Builders Research Institute

King Post Truss (continued)



SPAN	NO ATTIC STORAGE	ATTIC STORAGE	NO ATTIC STORAGE	ATTIC STORAGE	NO ATTIC STORAGE	ATTIC STORAGE
16'-8" & LESS	8-10d.	14-10d.	8-10d.	15-10d.	4-8d.	5-8d.
16'-9" - 17'-8"	9-10d.	15-10d	8-10d.	14-10d.	4-8d.	5-8d.
17'-9" - 18'-8"	9-10d.	15-10d.	9-10d.	14-10d.	4-8d.	5-8d.
18'-9" - 19'-8"	10-10d.	16-10d.	9-10d.	15-10d.	4-8d.	5-8d.
19'-9" - 20'-8"	11-10d.	17-10d.	10-10d.	16-10d.	4-8d.	6-8d.

LOADING DATA

NO ATTIC STORAGE	SPACING 24" O.C.	ATTIC STORAGE 20 p.s.f. includes necessary flooring
2.5 p.s.f.	ROOFING	2.5 p.s.f.
2.5 p.s.f.	SHEATHING	2.5 p.s.f.
2.5 p.s.f.	TRUSS	2.5 p.s.f.
20.0 p.s.f.	SNOW	20.0 p.s.f.
23.0 p.s.f. (uplift)	WIND	23.0 p.s.f. (uplift)

W Truss Small Homes Council 5/12 slope, 20′–8″ to 32′–8″ spans, 2′–0″ o.c. spacing

1. Determine out-to-out dimensions of span.

2. Locate span on member size table.

NO ATTIC STORAGE

SPAN ➡	21′	22′	23′	24′	25′	26′	27′	28′	29′	30′	31′	32′
two upper top chords	One 2"x4"x14'		One 2"x4"x16'		One 2"x6"x18					Two 2"x6"x10'		Two 2"x6"x12'
two lower* top chords	Two 2"x4"x10'		Two 2"x4"x12'		Two 2"x 6" x 12'						Two 2"x6"x14'	
two bottom chords	Two 2"x4"x12'		Two 2"x4" x 14'			Two 2"x 4"x16"				Two 2"x4"x18'		
two short diagonals	One 1"x 4" x 8'			One 2"x4"x8'		One 2"x 4"x 10'						
two long diagonals	One 1"x 4" x 14'			One 2"x4"x16'**						One 2"x 4" x 18'**		

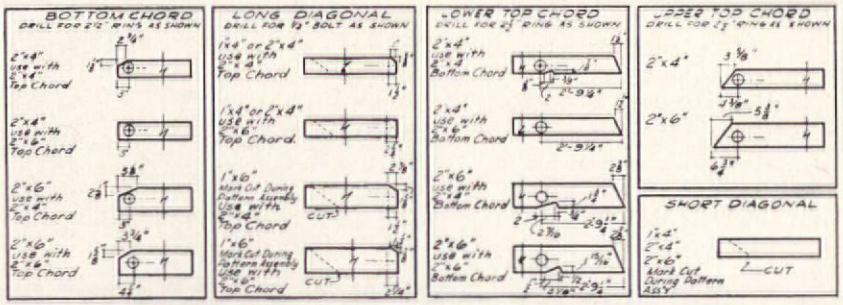
*The length of these members provide a 30" horizontal overhang. If a different overhang is needed, change lengths & cutting diagrams.
**Laterally brace long diagonals at center with scabs or solid bridging.

ATTIC STORAGE

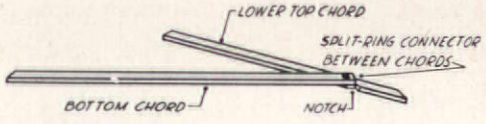
SPAN ➡	21	22	23	24	25	26	27	28	29	30	31	32
Two Upper Top Chords	One 2"x4"x14'		One 2"x6"x16'			One 2"x6"x18'			Two 2"x 6"x 10'			
Two lower* Top Chords	One 2"x4"x18'			Two 2"x 6" x 12'							Two 2"x6"x14'	
Two Bottom Chords	Two 2"x4" x12'	Two 2"x6" x12'		Two 2"x6" x 14'			Two 2"x6"x16'			Two 2"x6"x18"		
Two Short Diagonals	One 1"x 4"x8'		One 2"x 4"x 8'			One 2"x 4" x 10'						
Two Long Diagonals	One 1"x 6"x 14'		One 2"x4" x14'		One 2"x4" x16'			One 2"x 4"x18'				

*The length of these members provide a 30" horizontal overhang. If a different overhang is desired, revise lengths & cutting diagrams.

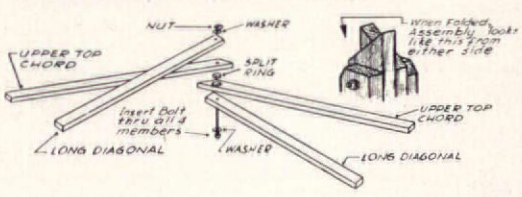
3. Cut all members for one truss. Drill for split rings and bolts as shown in cutting diagrams (right):



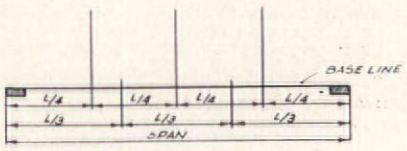
4. Make identical heel assemblies for each end of truss using split ring:

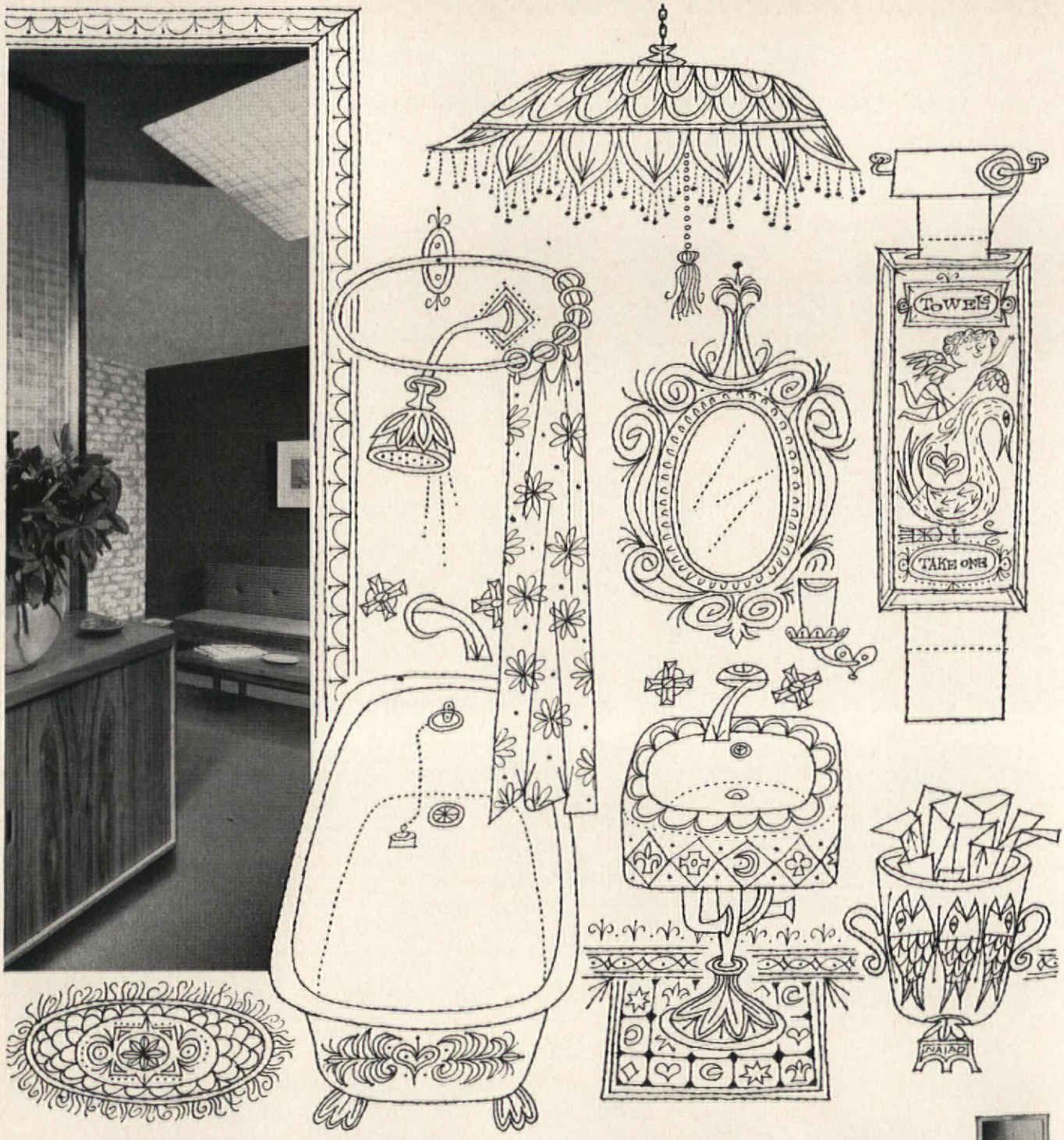


5. Make one peak joint assembly:



6. Measure and mark base lines on subfloor. Divide base as shown. Place jig blocks at each end:





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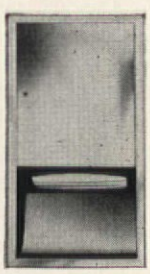
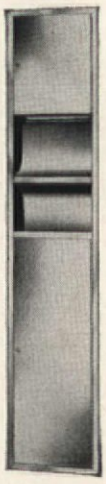
Write *Scott Paper Company, Dept. AR-4, Chester, Pa.*

"ScotTissue," Reg. U. S. Pat. Off.



Scott No. 943 Recessed Towel Cabinet.



Scott No. 945 Recessed Towel Cabinet and Waste Receptacle.

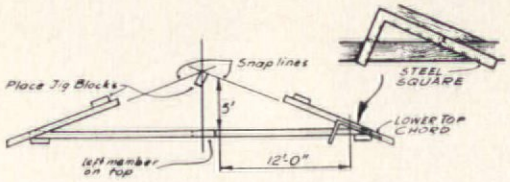
SCOTTISSUE TOWELS SYMBOL OF THE RIGHT KIND OF WASHROOM

SIMPLIFIED FRAMING METHODS—8: Trussed Rafters

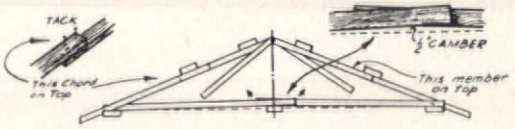
Presented through the cooperation of the National Association of Home Builders Research Institute

W Truss (continued)

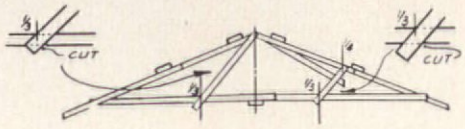
7. Place one heel assembly in jig. From inside corner at heel, measure 12′–0″ along base line. Erect perpendicular—measure 5′–0″. Snap chalk line from corner thru 5′ mark to center perpendicular line, to find lower point at peaks. Place other heel assembly—snap line to peak point already established. Place jig blocks against upper side of lower top chord. Place point of jig block and touching chalk line at peak:



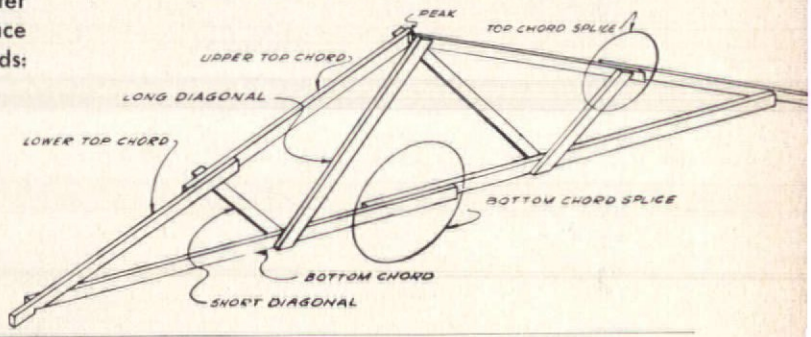
8. Place peak joint assembly with upper top chords firmly against blocks. Tack to hold temporarily in place. Place jig block at center of bottom chords allowing a ½″ camber. Place jig blocks near peak outside of upper top chords:



9. Swing left long diagonal until it intersects ⅓ span point. Mark necessary cut. Lay right short diagonal in place so that it intersects ¼ span point on top and ⅓ span at bottom:



10. Recheck alignment on all members. Be sure notches are firmly against all blocks. Disassemble the truss. Cut diagonals short of mark. Use disassembled members as patterns. Make up assemblies for heel joists and peak joints. Stack until ready for use. Use blocks and chalk lines as jig, to build all trusses as described above. Follow nailing schedule. Tighten bolts.

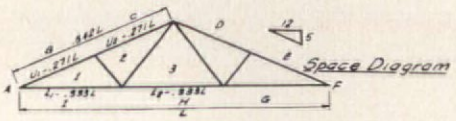


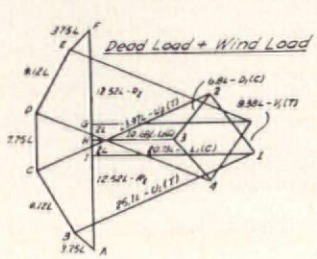
11. Nailing Schedule

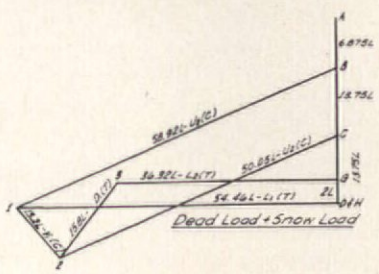
SPAN	TOP CHORD SPLICE		SHORT DIAGONAL TO TOP & BOTTOM CHORD	
	NO ATTIC STORAGE	ATTIC STORAGE	NO ATTIC STORAGE	ATTIC STORAGE
20'8" or less	15-10d.	24-10d.	4-8d.	4-8d.
20'9"-22'8"	17-10d.	26-10d.	4-8d.	4-8d.
22'9"-24'8"	18-10d.	29-10d.	4-8d.	4-10d.
24'9"-26'8"	20-10d.	31-10d.	5-10d.	4-10d
26'9"-28'8"	21-10d.	33-10d.	5-10d.	5-10d.
28'9"-30'8"	22-10d.	36-10d.	5-10d.	5-10d.
30'9"-32'8"	24-10d.	38-10d.	6-10d.	5-10d.

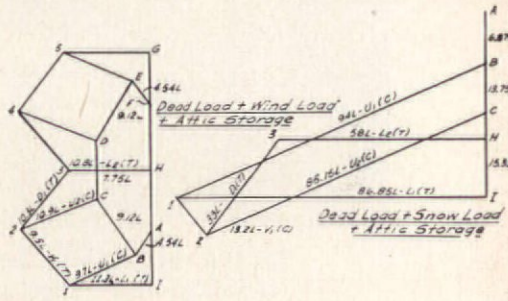
SPAN	LONG DIAGONAL TO PEAK & BOTTOM CHORD (PLUS BOLT)		BOTTOM CHORD SPLICE	
	NO ATTIC STORAGE	ATTIC STORAGE	NO ATTIC STORAGE	ATTIC STORAGE
20'8" or less	4-8d.	8-8d.	10-10d.	15-10d.
20'9"-22'8"	4-8d.	9-8d.	10-10d.	16-10d.
22'9"-24'8"	5-8d.	10-10d.	11-10d.	18-10d.
24'9"-26'8"	5-10d.	11-10d	12-10d.	19-10d
26'9"-28'8"	5-10d.	12-10d.	13-10d.	21-10d.
28'9"-30'8"	5-10d.	13-10d.	14-10d.	22-10d.
30'8"-32'8"	6-10d.	14-10d.	15-10d.	24-10d.

Design Data









Lippincott & Margulies choose

The Purple Tree Cocktail Lounge, a new attraction in the Hotel Hamilton, Washington, D.C. On the floor—Bigelow's Empire-Saxony in a marbleized block pattern, green and gray shades.

Bigelow carpet for fashionable Hotel Hamilton

Drawing on his wide experience in the hotel field, Mr. W. P. Margulies, of Lippincott & Margulies, makes these comments concerning his use of Bigelow carpets:

"Hotel interiors are planned with the thought of providing attractive surroundings in a pleasant, quiet environment. Every interior should appear tasteful and charming to the thousands of guests visiting the hotels.

"In our experience, Bigelow carpets are not only attractive, but they hold up well under heavy traffic. From a design standpoint, they are available in a wide range of colors and textures.

"Patterns can be easily made to order by Bigelow, such as the marble square pattern we designed for the Purple Tree Cocktail Lounge in the Hotel Hamilton. Further, stock patterns can be re-colored, as they often are to suit our specifications.

"We are well pleased with Bigelow Carpet performance and appearance."

If you are planning an installation, consult Bigelow's carpet experts as early in your planning as possible.

Our trained specialists will help you find the right color, pattern and weave to suit your installation . . . at a price your client can afford.

Telephone your nearest Bigelow sales office today, (see listing below) for carpet samples or further information.

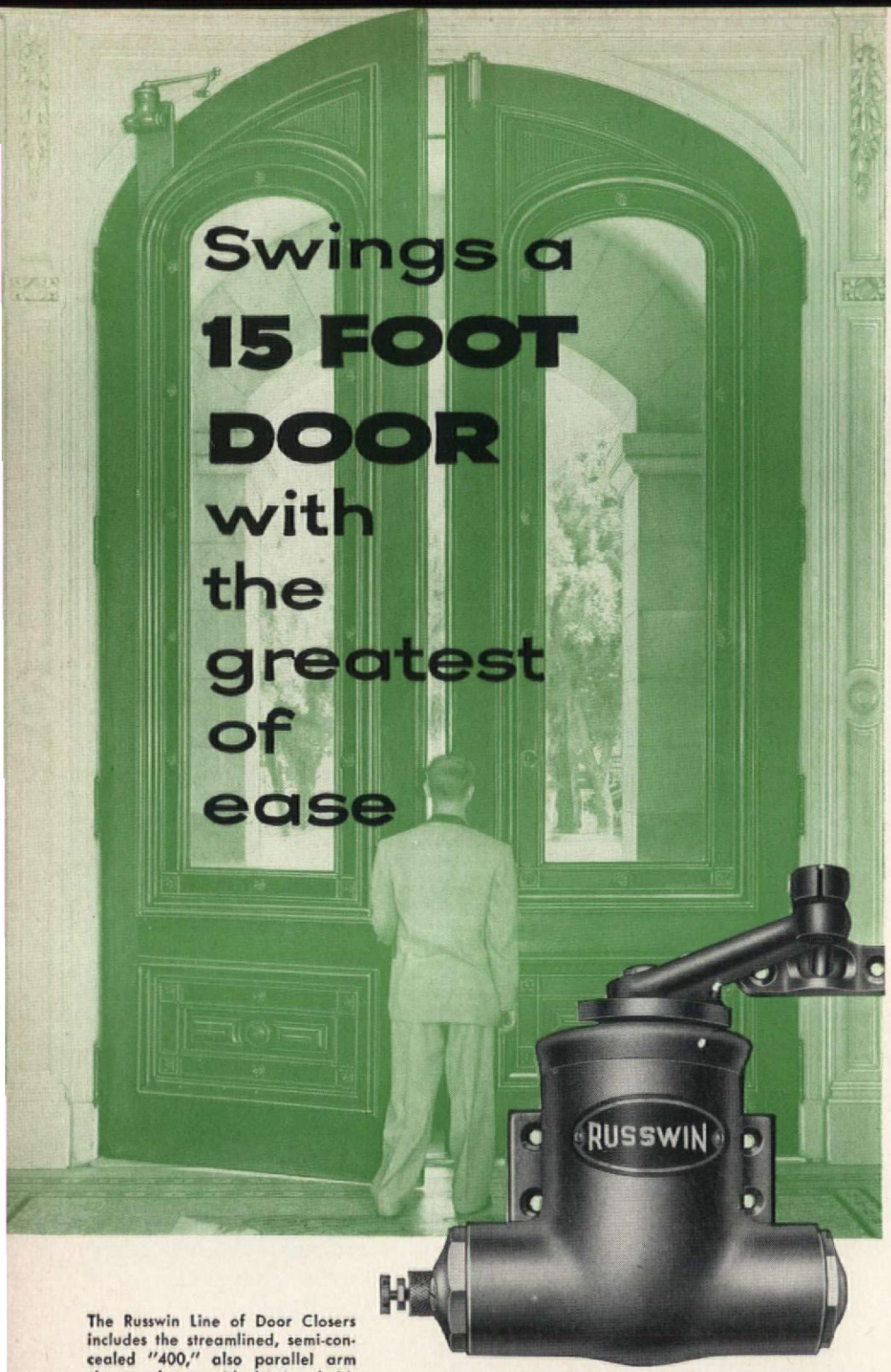
Walter P. Margulies of Lippincott & Margulies, Inc., New York. Mr. Margulies's firm is noted for work in many prominent hotels throughout the country, including: the Hamilton in Washington, D. C.; the Lincoln in Indianapolis; the Conrad Hilton in Chicago; the Ten Eyck in Albany; the Seneca in Rochester; and the Taft in New York.

SINCE 1825
BIGELOW
Rugs – Carpets

BIGELOW Rugs and Carpets

Beauty you can see . . . quality you can trust . . . since 1825

Bigelow sales offices are located in the following strategic cities: Atlanta, Ga.; Baltimore, Md.; Boston, Mass.; Buffalo, N. Y.; Chicago, Ill.; Cincinnati, Ohio; Cleveland, Ohio; Columbus, Ohio; Dallas, Tex.; Denver, Col.; Detroit, Mich.; Hartford, Conn.; High Point, N. C.; Indianapolis, Ind.; Kansas City, Mo.; Los Angeles, Calif.; Milwaukee, Wisc.; Minneapolis, Minn.; New York, N. Y.; Philadelphia, Penna.; Pittsburgh, Penna.; St. Louis, Mo.; Salt Lake City, Utah; San Francisco, Calif.; Seattle, Wash.

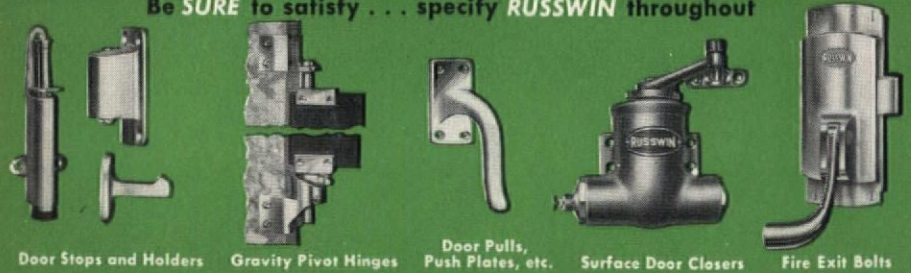


The Russwin Line of Door Closers includes the streamlined, semi-concealed "400," also parallel arm closers, closers with friction hold-open arms, a hold-open type with fusible links, hospital types, etc.

You can depend upon Russwin Quality for "tops" in door closer performance. The main entrance door of the State Capitol Building in Sacramento California, is 5′ wide, 15′ high and 3½″ thick. The glass is heavy plate. On this huge door, a standard Russwin "F" Surface Door Closer has been operating satisfactorily for many years. Russell & Erwin Division, The American Hardware Corporation, New Britain, Conn.

SINCE 1839
RUSSWIN®
DISTINCTIVE HARDWARE

Be *SURE* to satisfy . . . specify *RUSSWIN* throughout



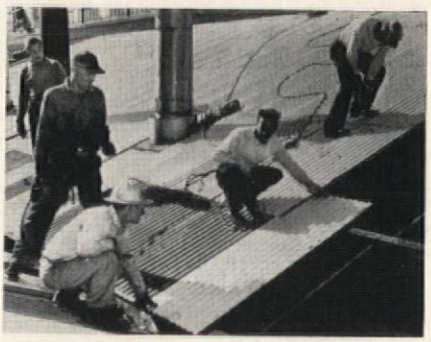
Door Stops and Holders | Gravity Pivot Hinges | Door Pulls, Push Plates, etc. | Surface Door Closers | Fire Exit Bolts

AE PRODUCTS

(*Continued from page 211*)

NEW PORCELAIN FINISH

This new procelain enamel coating has a full matte, acid resisting finish designed to meet a long-time need of architects and builders. It is available now and is being offered primarily to fulfill an important need in architectural curtain wall construction. Reportedly, the finish can be used on all types of structures and fills a special need in the field of monumental building construction.



Enamel Acid Resistant Finish

Semi-matte or glossy porcelain enamel finishes repel acid attack due to the basic frit formula used. The problem in developing the new coating involved a deficiency in the chemical properties of one frit used to produce a full matte finish. Normally, acid resistance has been somewhat related to glass; now, full matte, or "dead matte," as it is sometimes termed, can be obtained with higher acid resistance than is normally called for in architectural porcelain panels. A wide color range is available in many pastel shades. *Bettinger Corp., Waltham, Mass.*

PROTECTED METAL ROOF DECK

Plasteel Roof Deck was developed with a built-in vapor barrier that reportedly will permanently resist corrosive influences and high humidity conditions. Manufactured by a process combining the structural strength of steel with three protective coatings: a bond coat, a weather-sealed asphaltic plastic coating; and a pure mineral mica topping, it has an application in almost every field of industry. The manufacturers especially recommend it for in-

(*Continued on page 223*)

A-E PRODUCTS

(*Continued from page 222*)

stallation on paper mills, chemical plants and other buildings where corrosion and high humidity conditions prevail.

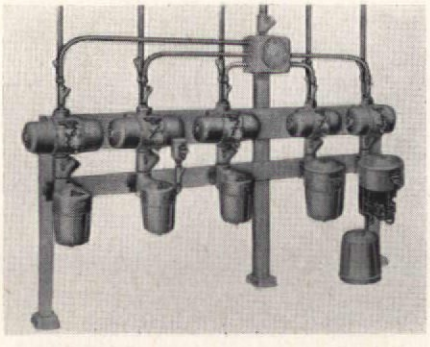
In additions to the built-in vapor barrier which eliminates additional layers of felt and tar under the installation, Plasteel has a sound absorbent surface that reduces reverbant noises and also eliminates field painting by the factory coating of asphaltic-plastic with a mica surface.

Plasteel Roof Deck Panels are 24 in. wide with telescoping ends that provide nesting of end laps and give a smooth unbroken roof surface. The mica coating on both sides provides light reflectivity and an attractive appearance to the underside of the deck. The asphaltic-plastic coating into which the pure mica is embedded under heat actually seals itself at all joints and will eliminate the need for maintenance and periodic painting. *Plasteel Products Corp., Washington, Penn.*

NEW MOTOR AND LINE STARTER

A complete new line of explosion-proof, dust-tight, rain-tight circuit breaker, motor starter and line starter combination enclosures, *Unilet*, has been announced by the *Appleton Electric Co.*

Each component *Unilet* for circuit breaker, motor starter and seal possesses full seven-thread engagement at the coupling joints as well as on the bolt-free covers. Absolutely safe entrance



Explosion Proof Motor Starters

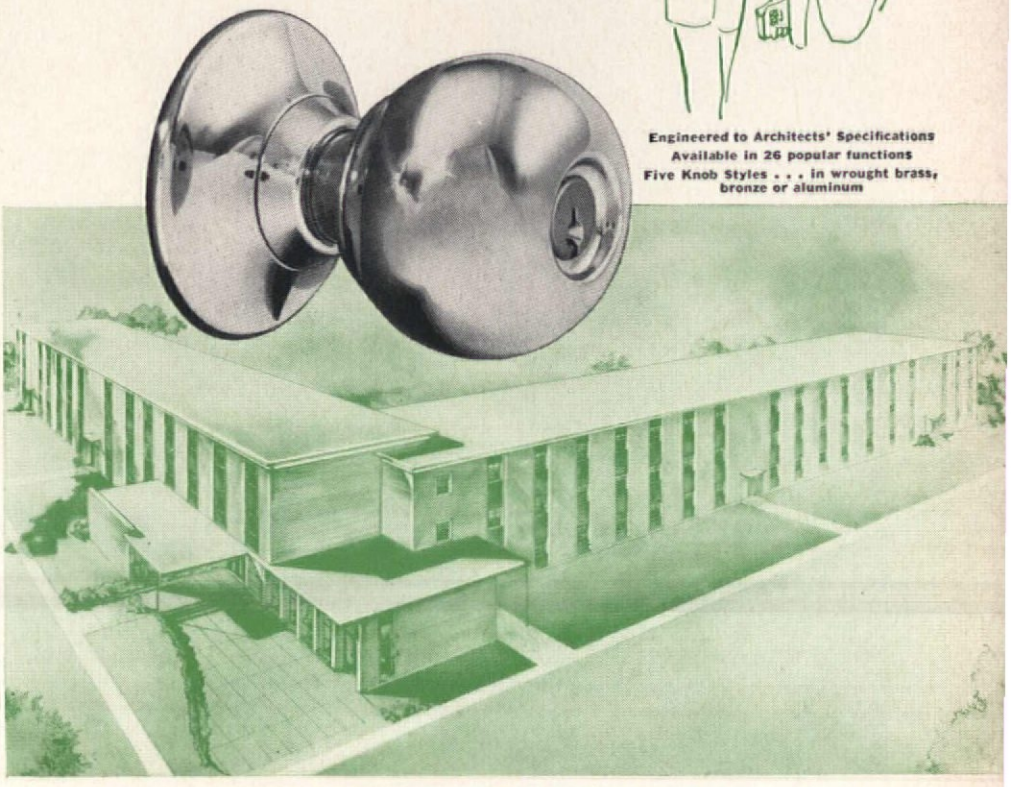
to individual motor starters for maintenance work is claimed for both single and banked combinations in hazardous areas without shutting off other branch circuits. No "live" circuit breaker wires

(*Continued on page 226*)

The Class of '54

"Stilemaker" Locks and Latches

Engineered to Architects' Specifications
Available in 26 popular functions
Five Knob Styles . . . in wrought brass, bronze or aluminum



ANOTHER NEW BUILDING EQUIPPED WITH STILEMAKER LOCKS AND LATCHES
Men's Dormitory, Abilene Christian College, Abilene, Texas
Architects: Wilson & Patterson, Fort Worth, Texas
Contractors: Al Ward Construction Co., Tulsa, Oklahoma
Dealer: Lion Hardware Co., Abilene, Texas

If you examine all the features of the Russwin "Stilemaker" Heavy Duty Lock Line, you'll see how it lives up to its reputation . . . the class of '54. Check and compare its clean-cut, crisp styling . . . five choice designs; its velvet-smooth action; its sturdy, *toleranced* construction . . . precision-made parts that assure long, trouble-free operation; its enduring finishes; and its easy installation.

"Stilemaker" locks and latches in service are proving all that's claimed for them. They are responsible for many impressive, new installations scheduled. Ask your Russwin builders' hardware specialist for complete details. Russell & Erwin Division, The American Hardware Corporation, New Britain, Conn.

RUSSWIN®
"Stilemaker"
HEAVY DUTY LOCK LINE

Be SURE to satisfy . . . specify RUSSWIN throughout

"400" Closers | Overhead Door Holders | Miscellaneous Hardware | "Ten Strike" Cylinder Locks

When it comes to **development homes**

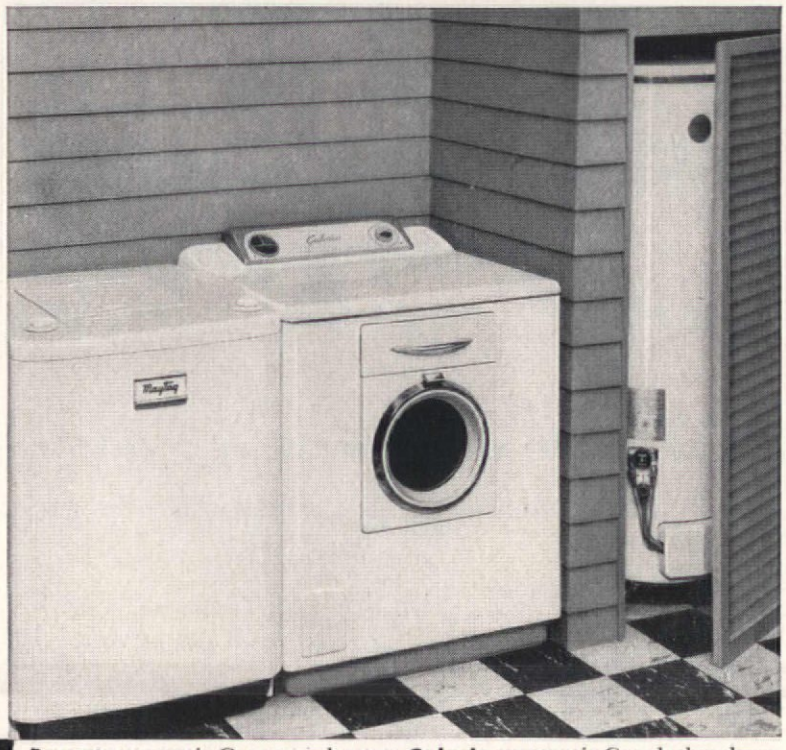
On three grounds – price, performance and appearance – Gas appliances belong in your development homes. They cost you less to install (and cost your purchasers less to use them). They operate more efficiently because Gas is both flexible and instantaneous. And they sell on sight! For the new Gas ranges are so automatic they cook whole meals all by themselves. The new Gas refrigerators are so automatic they feed ice cubes into a basket all by themselves. You can talk about, boast about, even write ads about your all-automatic Gas kitchens. They're the plus that can turn prospects into buyers and buyers into happy homeowners. And they make your own margin of profit that much bigger.

. . . nothing makes as much sense as Gas

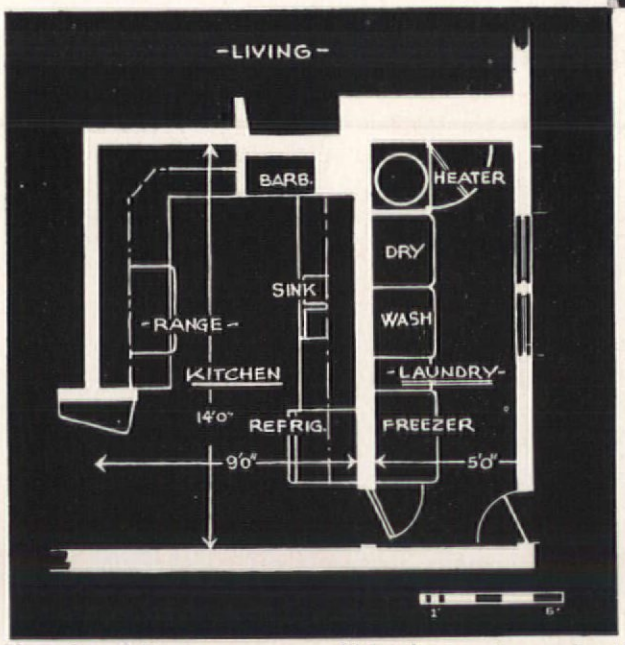
This New Freedom Gas Kitchen* features an automatic Gas range, made to "CP" standards by the **Hardwick** company.

Royal Wood cabinets by the **Mengel Co.**

Kitchens sell homes, and this **Servel** Gas refrigerator certainly helps sell a kitchen. It puts ice in a basket automatically, does away with messy trays. Few women (and not a man in the world) can resist it—or the home that has it.



Bryant automatic Gas water-heater; **Caloric** automatic Gas clothes dryer.



The Gas clothes dryer is another extra that frequently clinches a sale. Most development home purchasers have heard of it, read about it, dreamed about it, but few ever thought it would really be theirs. (If you're considering any dryer but Gas, just remember that professional laundries prefer Gas dryers 30-1.)
The Gas water-heater is demonstrably superior. Not only does it cost less to install and use, but a 30-gallon tank actually delivers more hot water than an 80-gallon tank run by any other all-automatic fuel.
Gas—dependable, efficient Gas—is 3 times faster.

AMERICAN GAS ASSOCIATION

Your local Gas company will be happy to work with you on any problem.

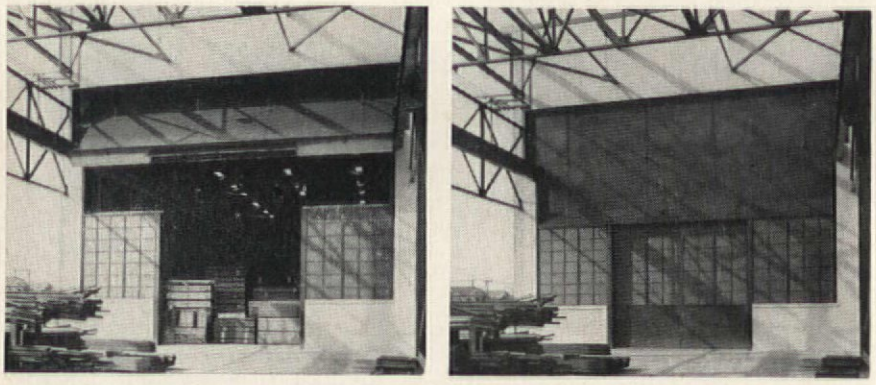
Only Gas costs so little to install and operate

GAS—the modern fuel for automatic cooking . . . refrigeration . . . water-heating . . . house-heating . . . air-conditioning . . . clothes-drying . . . incineration.

*Reg. A. G. A.

CRANEWAY DOORS Provide

Open and Shut Case



Architect—Albert Kahn Associated Architects and Engineers, Inc.
General Contractor—Maxon Construction Company, Dayton, Ohio.

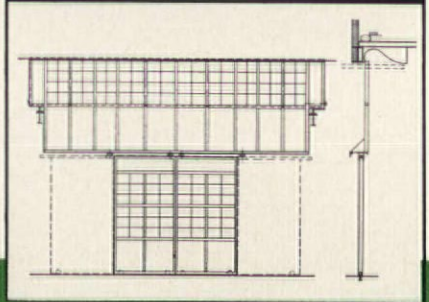
. . . of increased working efficiency and reduction of heating costs!

When a craneway extends from inside a building to an outside railroad siding or storage yard it's an open and shut case that Byrne can provide the finest in a dependable closure. This craneway opening shown above provides a substantial reduction in heating costs with the added advantage of increased working efficiency.

Byrne crane entrances combine upward acting doors at the crane rails with swinging or sliding doors below. The upper door is always motorized, the lower doors may be specified for manual or motor operation. Interlocks insure complete safety, with automatic or selective controls located as desired.

Crane entrance doors are furnished in steel, or aluminum which is gaining increasing acceptance as a construction material. Windows may be installed as desired for consistent architecture.

Byrne Crane Entrance Door Operation



For successful development of crane entrance doors, our engineering consultation is furnished without obligation.

FOR INFORMATION
regarding Byrne doors and facilities consult Sweet's Catalog or write direct for our brochure.

BYRNE doors, inc.

Dept. r-3
1421 East 8 Mile Road, Ferndale, Detroit 20, Mich.
101 Park Ave., New York 17, N. Y.
Cafritz Bldg., Washington 6, D. C.

AEH PRODUCTS

(*Continued from page 223*)

are exposed while the motor starter enclosure is open on a line starter combination. According to the manufacturer there is no unnecessary "down time" on machines and equipment when *Unilet* units are installed.

Other features include: U. L. approval on banked circuit breaker *Unilets* up to groups of three for Forms 1 and 2;

lightweight construction for easy installation without the use of heavy lift equipment; standardized mounting frames for interchangeability of most well-known makes of circuit breakers and motor starters in certain sizes; simplified "straight-thru" wiring; versatile hub adaptors which permit use of over-size conduit and conductors; and streamlined push-button and pilot-duty control.

This new Appleton Unilet line covers all breaker-starter control equipment of leading firms rated to 225-ampere breaker loads and to 100 H.P. on 3-phase induction motors at 600 volt max. *Appleton Electric Co., 1701–59 Wellington Ave., Chicago 13, Ill.*

SUMMER AIR CONDITIONER

A new Summer Air Conditioner, model SAC, which is sized and finished to match the FES and FEC Series winter heating units by Janitrol, is announced by Surface Combustion Corporation of Toledo. The manufacturers claim several features, including a quiet compressor operation, especially desirable in residential and certain commercial installations. This quietness is further achieved by use of thick fiber glass acoustical and thermal insulation which protects the unit from extreme heat while adding to the sound deadening features.

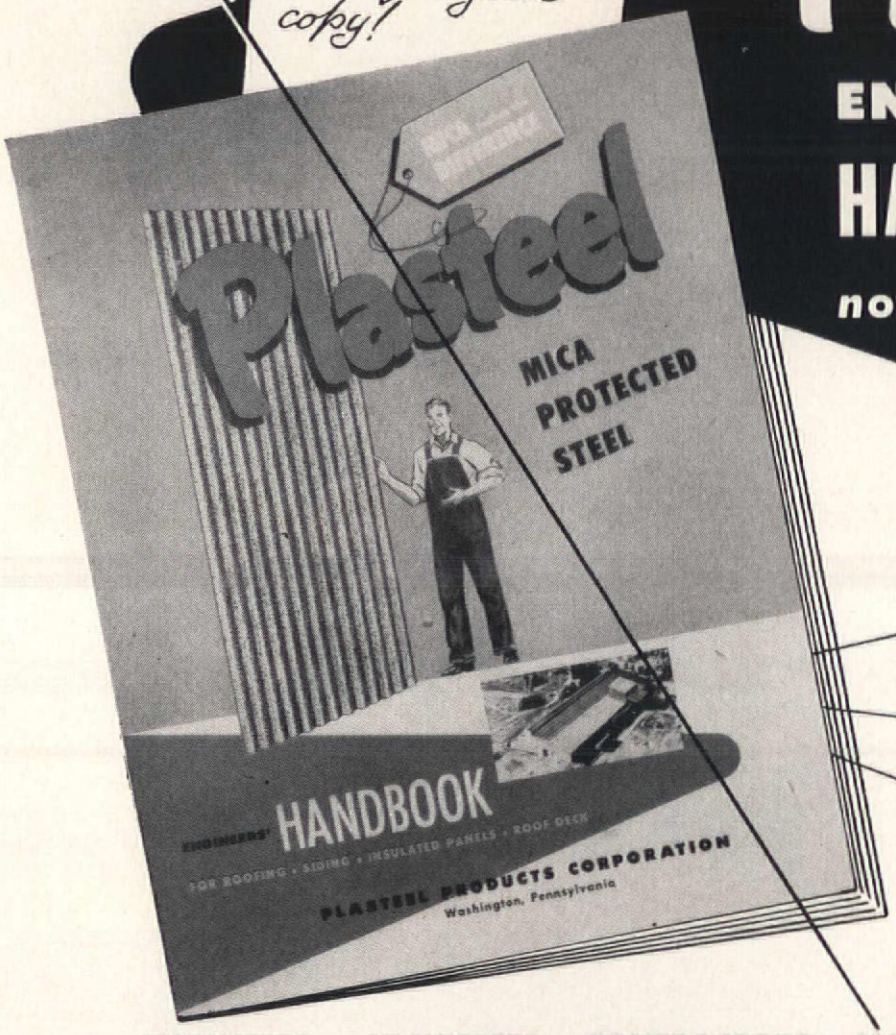
Three models are offered in the summer air conditioner line. The five-ton capacity unit is a combination of the two and three-ton capacity models. All are housed in the Janitrol blue-gray finish steel casing no larger than the average refrigerator. Standard equipment includes a resilient mounted centrifugal fan, driven by a 230-volt 60 cycle single phase continuous duty motor. The mo-

(*Continued on page 230*)

NEW Plasteel ENGINEERS' HANDBOOK now available

MEMO

Write for your copy!



ROOFING and SIDING

ROOF DECK

INSULATED PANELS

ENGINEERS • ARCHITECTS • CONTRACTORS • MAINTENANCE MEN

This New Engineers' Handbook is a valuable construction guide for the use of Plasteel Products. Complete instructions and specifications—fully illustrated to simplify the efficient and economical erection of Plasteel—the only protected metal roofing and siding with Mica advantages! *Mica does make a big difference!*

PLASTEEL PRODUCTS CORPORATION
Washington, Pennsylvania

PLASTEEL PRODUCTS CORPORATION AR-3-4
Washington, Pennsylvania

Please Rush New Plasteel Engineers' Handbook

Name..... Title.....

Company.....

Address.....

City..... State.....

Parker Pen Company chooses comfortable Day-Brite recessed lighting for office and production areas of new plant

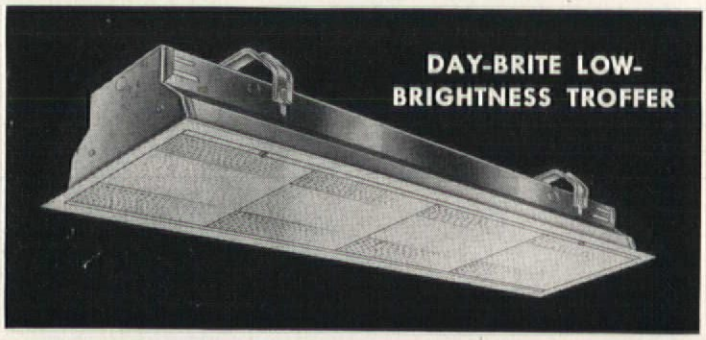
Even in these days of advanced lighting practices, every so often an installation comes along that reaches beyond the usual and touches greatness.

The lighting in Parker Pen Company's new Arrow Park plant at Janesville, Wisconsin, is one of these.

Every Parker worker, including those in production plant areas, works beneath a high level of super comfortable illumination from Day-Brite recessed troffers. Beyond a doubt, this is one of the finest industrial lighting installations in the world.

General offices, private offices and conference room are lighted by 854 runs of 8-ft. Day-Brite Low-Brightness Lens troffers recessed into a modern grid type suspended ceiling. Equipped with Holophane Controlens* to reduce glare, these fixtures furnish extremely comfortable illumination.

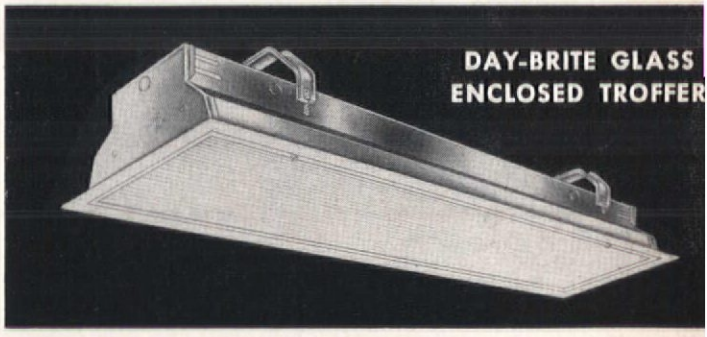
*®HOLOPHANE CO., INC.



The new Arrow Park plant in Janesville, Wisconsin—home of famous Parker pens. Its white Roman brick exterior encloses 212,500 square feet of floor space housing all pen and pencil manufacturing facilities of the firm. Architects: John J. Flad and Associates of Madison, Wisconsin. Consulting Engineers: Beling Engineering Consultants, Moline, Illinois. Electrical Contractor: Westphal & Co., Janesville, Wisconsin.

LOOK AT DAY-BRITE TROFFERS . . .

A partial view of the attractive Parker Pen Arrow Park plant area. Covering 200,000 square feet, this huge working space looks like anything but a factory. *Twenty-four hundred 8-ft. Day-Brite glass enclosed troffers provide 55 footcandles of glare-free light for every plant operation.* This is believed to be a more extensive use of recessed troffer lighting in an acoustical grid type suspended ceiling than in any other plant in the nation.



We do not suggest that troffer lighting is the *only* way to achieve vision-saving levels of comfortable plant illumination. Circumstances will often dictate the choice of fixtures designed specifically for industrial use—such as Day-Brite's CFI Day-Line® with 10% upward component.

Rather, we present the Parker Pen installation as evidence of the trend among leading architects and engineers—*and their clients*—toward more and more emphasis on *maximum quality* lighting.

It is significant that the demand for Day-Brite fixtures has grown with this trend.

You need only to inspect and handle a Day-Brite fixture yourself to know the reason why. You can *feel* the value... *feel* the quality that makes Day-Brite the best buy on the market. Look at Day-Brite... *feel* the difference... before you specify.

Day-Brite Lighting, Inc., 5465 Bulwer Ave., St. Louis 7, Mo. In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario.

CALL OR WRITE YOUR NEAREST DAY-BRITE REPRESENTATIVE

425

FEEL THE DIFFERENCE . . .

"DECIDEDLY BETTER"
DAY-BRITE
Lighting Fixtures

BEFORE YOU SPECIFY!

it's FIAT again!

RUGGED TOILET COMPARTMENTS SPECIFIED FOR NEW HOPKINS ELEMENTARY SCHOOL, HOPKINS, MINN.

Haxby, Bissell & Belair, architects chose FIAT Duro Flush Type Toilet Compartments to complement the splendid architecture of this fine new school. Naugle-Leck, Incorporated was the contractor.

Compartments are finished in FIAT baked enamel rose stone color to harmonize with the rose-colored tile and light green plaster walls. Floor is green, rose and beige tile.

These sturdy compartments will withstand the rough usage of school children for years. Panels, pilasters and doors are made of two sheets of #20 gauge stretcher leveled steel, with fiber board sound deadener core cemented uniformly to the metal, and interlocked under tension the entire length of the edges. Pilasters are securely anchored to the floor with an adjustable floor saddle and locking bolt. Durable hardware is chrome plated. Bases of pilasters and floor connections are concealed by 3" high brass chrome plated plinths.

Unique low doors were chosen to facilitate supervision of elementary school children.

MADE BY FIAT FIRST IN SHOWERS

WHEN YOU SPECIFY FIAT ...YOU SPECIFY QUALITY

TOILET COMPARTMENTS
DRESSING COMPARTMENTS
HOSPITAL CUBICLES
PRESDWOOD COMPARTMENTS*

*Being used extensively for Army and Navy installations. Catalog on request.

SEE SWEET'S 22b Fi ARCHITECTURAL

. . . for detailed compartment information and the address of your nearest FIAT representative.

FIAT METAL MANUFACTURING COMPANY
THREE COMPLETE PLANTS—ECONOMY • CONVENIENCE • SERVICE

FIAT

Long Island City 1 New York
Franklin Park, Ill. (Chicago Suburb)
Los Angeles 63 California

In Canada: FIAT COMPARTMENTS are made by Porcelain and Metal Products, Ltd., Orillia, Ontario

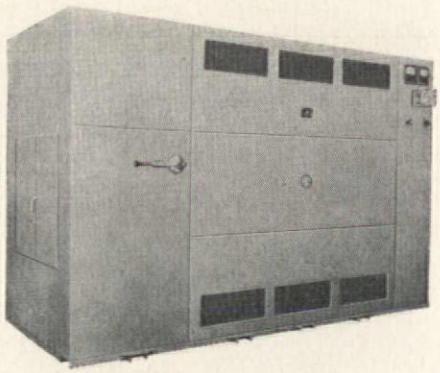
AEH PRODUCTS

(*Continued from page 226*)

tor has overload protection. The fan sends cooling air through the same ducts as used by the winter air conditioning unit. The finger tip control damper on the adjoining Win-Sum Twins is interconnected so that the twin unit will not operate when one is already in use. The hermetically-sealed warranteed compressor is driven by a direct connected, integral horsepower motor. The unit has a water-cooled condenser and the refrigerant is controlled by a twin-apillary tube restrictor. *Janitrol Division, Surface Combustion Corporation, Columbus 16, Ohio.*

TRANSFORMER

Marcus 2000KVA Transformer — Unit Load Center features built-in automatic forced draft equipment to increase capacity under overload conditions. It is rated: primary 4800.60 cycles, 3 phase; secondary 480 volts. The unit comes complete with fused load break air switch on primary, and secondary metering and pull section, primary switch



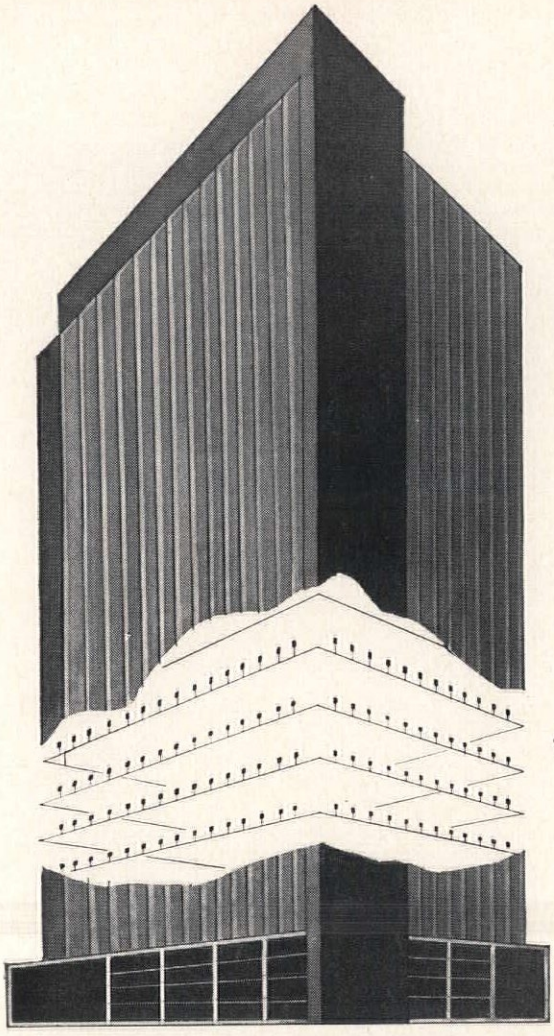
Transformer Used Under Overload

handle and access door interlocked for safety. All Marcus transformers have class B hi-dielectric, hi-heat magnet wire insulated with Johns-Manville Quinterra and Dupont's "Mylar" polyester film which reportedly affords greater puncture strength. *Marcus Transformer Co., Hillside, N. J.*

TRANSLUCENT PLASTIC PANELS

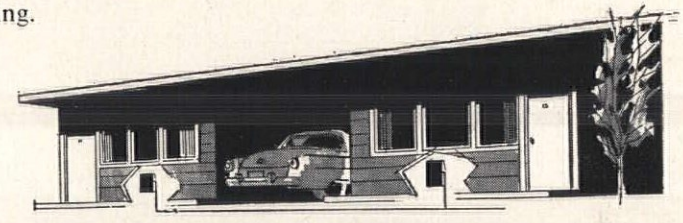
These strong and colorful panels, which can be used for many things from patio roofs to walls and windows, are made in four pastel colors and white. Each color

(*Continued on page 234*)



Modulated Heat with Thermostat in Every Room

Every room in a building is an individual zone, with its own thermostat. Every room is heated with filtered warm air, continuously circulated by a compact, recessed wall unit. Sets a new standard of comfort and heating economy for every type and size of residential, institutional and commercial building.



SelecTemp Highlights

THERMOSTAT IN EACH ROOM. Temperatures can be varied in every room to fit the "activity plan" and personal preference of the occupants.

MODULATED HEAT. Air circulation is continuous. Both temperature and volume of air is automatically modulated, as required to offset heat loss from room.

FILTERED, CIRCULATED AIR. Individual room air circulation prevents transmission of odors or bacteria from other rooms. Air is cleaned by a spun glass filter in each room unit. Filtered outside air can be introduced if desired.

BOILER LOCATION. Does not require centrally located heating plant. Boiler can be placed in any desired location, with proper distribution of heat to every room.

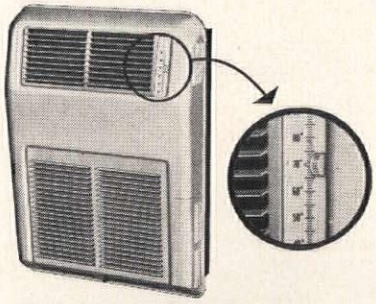
LOW POWER COST. No electricity required to operate circulating fans. Nonelectric thermostats.

LOW INITIAL COST. No other system can be so easily installed in either new or old construction. Small soft copper tubing (¼ inch I.D.) carries steam to individual room heater units. Return lines are ⅜ inch. Tremendous savings in installation costs.

LOW FUEL COST. Temperature easily reduced in unused rooms. Eliminates overheating.

AUTOMATICALLY BALANCED. No special adjustments of dampers, valves or orifices required to balance heating system. Each unit continuously regulates heat needed for each room. Automatically compensates for external heat sources such as fireplace or solar heat, without affecting temperatures of other rooms.

FOR LARGE OR SMALL BUILDINGS



Individual room control with continuous modulated heat

With SelecTemp heating, every room in the building is an *individual zone*, with its own thermostat. Low pressure steam, supplied to recessed wall units through small flexible copper tubing, provides heat and power for the circulating fan. Thermostats are nonelectric and require no wiring.

Exact, constant temperatures

Each room thermostat may be set at any temperature from 40 to 90 degrees. Heat in each room is accurately maintained at the temperature selected. The thermostat detects any change in temperature and regulates both the speed of the circulating fan and the steam supply to exactly meet heating requirements. SelecTemp thus eliminates ordinary on-and-off cycling and "cold 70" stratification. It constantly modulates from 1/20th of capacity to full capacity, supplying just the amount of heat needed. SelecTemp compensates automatically for variations due to changes in outdoor temperature, and in velocity and direction of the wind. It compensates for heat gains from the sun's heat, fireplaces, cooking ovens and body radiation.

Low installation and operating cost

The various parts of the selecTemp system are engineered for rapid economical installation without time wasting special provisions. SelecTemp units are delivered assembled in steel enclosures for mounting in wall stud spaces or wall openings. No electric power required for operation of circulating fans or thermostats—an important saving. Fuel savings result from elimination of wasteful overheating and from lower temperatures in unoccupied rooms. Small steam lines greatly reduce heat transmission losses.

THE IRON FIREMAN

SelecTemp TRADE MARK

PRODUCT OF IRON FIREMAN

Send for full information

IRON FIREMAN MANUFACTURING CO.
3161 W. 106th Street, Cleveland 11, Ohio.

Please send literature on Iron Fireman SelecTemp heating.

Name _____

Address _____

City _____ State _____

Copyright 1954
I. F. Mfg. Co.

If you've ever been bound by a budget limited to ordinary tile nailed or screwed to wood furring, this is important news for you. It's the "Ful-Spline" System for Fiberglas tile—the installation method that makes Fiberglas Acoustical Tile your *lowest cost non-combustible ceiling!*

FIBERGLAS BEAUTY ON LIMITED BUDGETS

By slashing installation costs as much as 53%, the "Ful-Spline" System for Fiberglas tile brings the finished cost of beautifully textured Fiberglas ceilings down to the ordinary tile level and, in many cases, even lower! It allows you, even with the most limited budget, to specify ceilings of Fiberglas Acoustical Tile—rated "incombustible" under Federal Specification SS-A-118a, dimensionally stable as a window pane (will not sag, warp, or buckle), acoustically equal or superior to fiberboard tile . . . and the perfect complement to fine design.

A COMPLETE METHOD

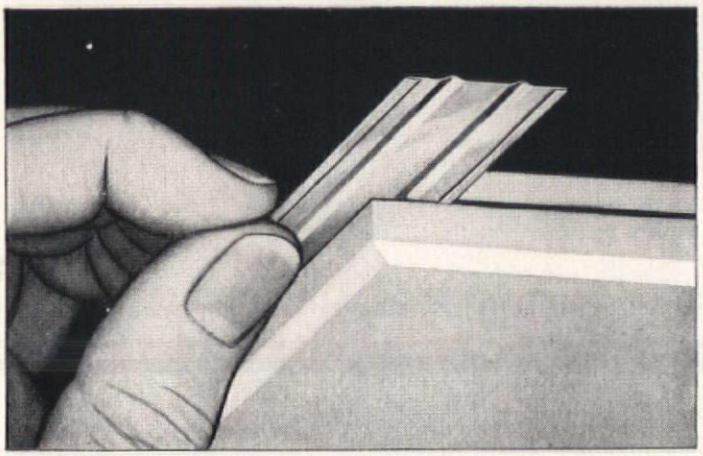
With Fiberglas tile applied by the "Ful-Spline" System, no building paper is required, no nails, no screws. Instead, aluminum splines are inserted in the kerfed edges of ¾ 24" x 24" Fiberglas TXW Tile. The splines are then stapl to the wood furring strips. Staples are not driven into t tile, so the finished job reveals no fasteners or suppor Application is fast and foolproof, even in hard furring su as long leaf yellow pine. Of course, 12 x 12 or 12 x 24 t may be used, but the 24 x 24 size is preferred. First, becau it increases the economy of the system by reducing appli tion cost. Second, it overcomes slight irregularities in level furring strips. And third, it has better scale in classroom corridors and other large areas.

FACTS FOR YOUR FILE

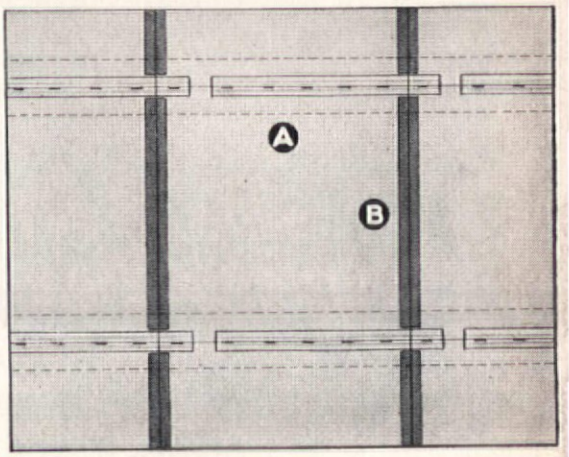
Learn more about Fiberglas tile applied by the economi "Ful-Spline" System. We will be glad to supply you wi further information on this revolutionary new installati method. Simply contact your nearest Fiberglas Branch Offi or write: Owens-Corning Fiberglas Corporation, Sound Co trol Products Division, Toledo 1, Ohio.

EW FIBERGLAS* INSTALLATION METHOD

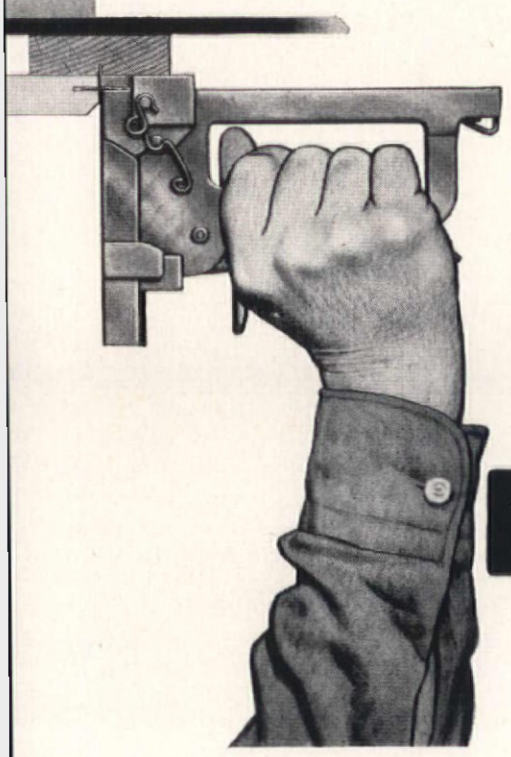
gives non-combustible acoustical ceilings at the low cost of ordinary tile nailed or screwed to wood furring



❶ Aluminum spline is inserted in kerfed edge of Fiberglas Acoustical Tile, 24" x 24" x ¾".



❸ Supporting splines (A) are parallel to furring, and continue through tile joints. Fiber cross splines (B) are used for leveling. They are not stapled, making installation still more economical.



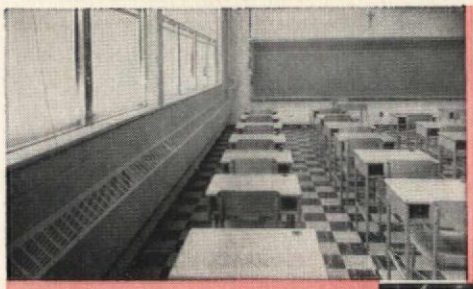
❷ Modified hand or air tacker with special attachment holds spline away from furring strip, drives 9/16" staples flush with face of spline, and into furring strip. Staples do not pierce tile!

OWENS-CORNING
FIBERGLAS

SOUND CONTROL PRODUCTS

FIBERGLAS TEXTURED, PERFORATED, SONOFACED* & STRIA ACOUSTICAL TILE. FIBERGLAS TEXTURED & SONOFACED CEILING BOARD. FIBERGLAS SONOCOR* PADS FOR METAL PANS. FIBERGLAS NOISE-STOP BAFFLES.

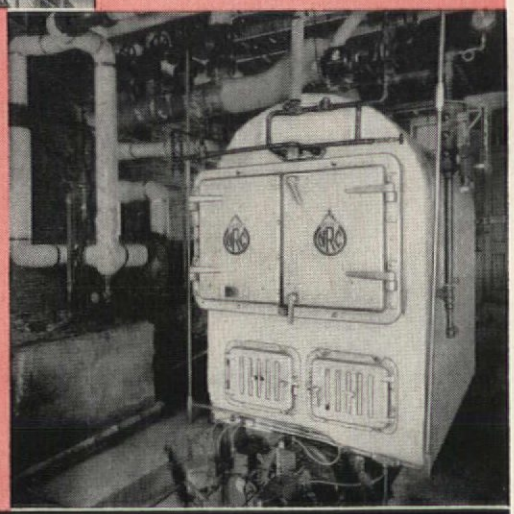
**Fiberglas, Sonofaced (Reg. U. S. Pat. Off.), Sonocor and Noise-Stop are trademarks of Owens-Corning Fiberglas Corporation.*



A typical schoolroom in the Immaculate Heart of Mary School of Rutland, Vermont, showing how National Fintube Convectors effectively protect children from window drafts.

This National Commercial Steel Boiler in the basement of the Immaculate Heart of Mary Church at Rutland, Vermont supplies steam to the church and forced hot water heat plus domestic hot water to the school.

The Immaculate Heart of Mary School in Rutland, Vermont. Architects: Dirsa and Lampron, Manchester, N.H.; General Heating Contractor: Lyman Russel.



This NATIONAL COMMERCIAL STEEL BOILER serves a dual purpose

Steam Heat for a Church
Hot Water Heat for a School
plus
Domestic Hot Water Supply

When a heating system was required for the new Immaculate Heart of Mary School in Rutland, Vermont, it was decided to install a new heating plant in the basement of the adjoining church to take care of both buildings' heating problems.

A National Commercial Steel Boiler, replacing the former boiler in the church, now provides the essential steam heat requirements of the church, and in addition, services the new school building with adequate heat of even, comfortable temperatures with National Fintube Convectors.

Economy of installation, minimum maintenance and low operating costs were the considerations that determined the selection of the National Heating System.

For detailed information on National Heating Products, write for Catalog No. 586-AR

THE NATIONAL RADIATOR COMPANY JOHNSTOWN, PA.

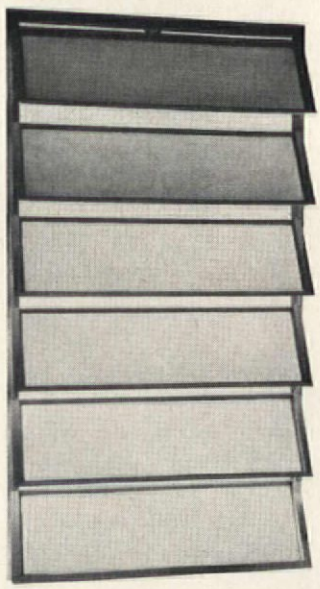
for Real Heating Comfort go NATIONAL

Branch Offices: Baltimore • Boston Buffalo • Chicago • Cleveland Detroit • New York • Philadelphia • Pittsburgh • Richmond San Francisco • Washington, D.C.

AIA PRODUCTS

(*Continued from page 230*)

has six degrees of density. The result is a series of panels which are virtually identical in color but have a range of light transmission from a low of 10 per cent to a high of 60 per cent. An architect can tailor the amount of light coming into a room by specifying one grade of density for a southern exposure and another grade for a northern exposure. But the color of both grades of panels will be identical when viewed in reflected light. These *Gradation Panels* are also structurally strong and easily used in building since they can be cut with a handsaw, nailed, screwed, riveted or puttied in place. They are constructed from Vibrin, a polyester resin produced by the Naugaruck Chemical Div., United States Rubber Co., and the fibrous glass made by the Ferro Corp.



Gradation Panels

This combination won't rust, rot, warp, swell or dent and is stronger than steel on a pound for pound basis. Closely controlled amounts of pigment and a densifying agent to get the grades of density in each color range also are added. Other uses for the panels are carports, wind deflectors, garage door panels, doors, displays, skylights, greenhouses, illuminated signs, etc. There are two standard sizes, 4 by 8 ft and 4 by 9 ft. There are three thicknesses, $\frac{1}{16}$, $\frac{3}{32}$ and $\frac{1}{8}$ of an in. *Russell Reinforced Plastics Corp., Lindenhurst, N. Y.*

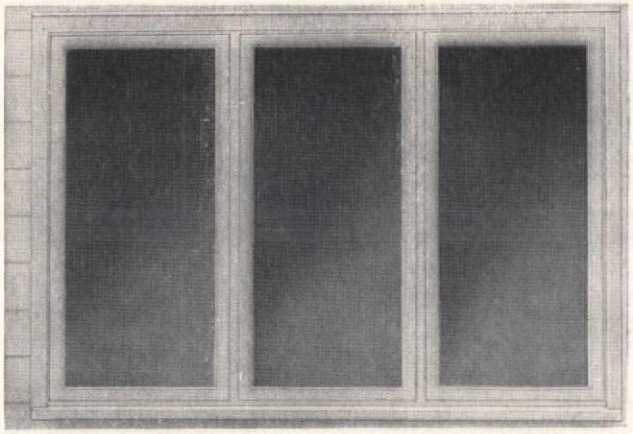
(*Continued on page 238*)

ANNOUNCING

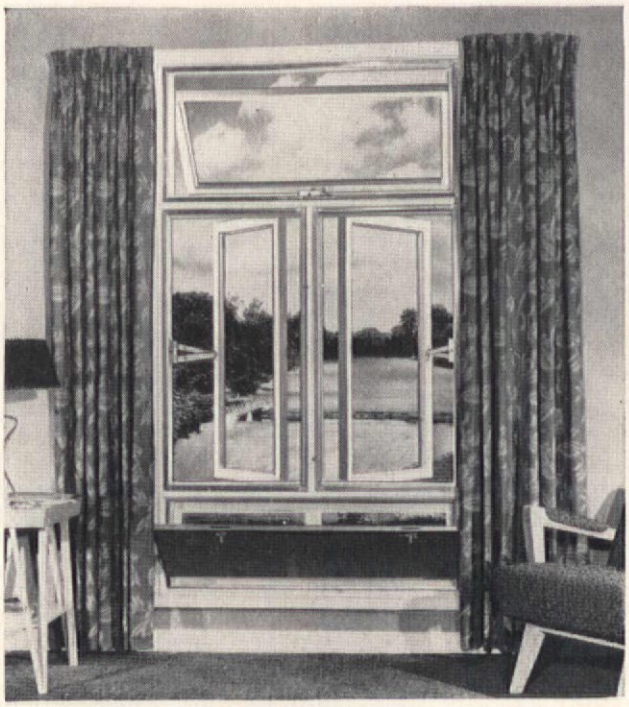
America's most versatile window

NEW CURTIS SILENTITE CONVERTIBLE

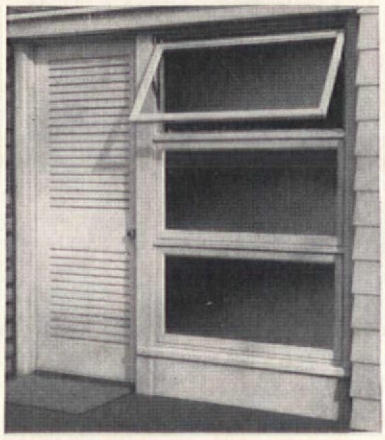
Now *one* basic window provides right- or left-swing casements—the popular awning window—swing-in hopper-type sash—and a thousand or more different window combinations. The new Curtis Silentite Convertible is available in units so proportioned that they can be combined to achieve almost an unlimited variety. Basic sash units come in ten sizes and companion louvre units in five sizes. Here is a window embodying traditional Curtis quality—yet priced for the modest building budget.



Attractive, economical casements are easy to have—with the new Curtis Convertible Sash.



Any degree of "top or bottom" ventilation is possible with Curtis Convertibles.



Now any homeowner can afford weather-tight awning windows—and window walls, too.

WHAT'S NEW about the New Curtis Silentite Convertible

- A complete factory-assembled unit, ready for quick, easy installation—basic frame with operating hardware, sash, screen and insulating light installed.
- Fits any wall construction. May be installed singly or in any desired combination of multiples—can be stacked both in width and height—ideal for window walls.
- Superior weather-tightness assured by modern spring-leaf type weather-stripping.
- New-type manual operator included. Crank operator available when sash are used for awning or casement installation.
- Wood louvre units available—made in five sizes—with interior birch doors for use in regulating ventilation.
- Like all Curtis Silentite Windows, the new Convertible is a WOOD window. All wood members completely toxic and water-repellent treated for long life.
- The new Convertible comes with a Curtis certificate guaranteeing materials and workmanship—assurance of *lasting* value.

It's an awning—a casement—a hopper —an all-purpose window priced to fit the lowest budget

Mail coupon for complete information.

1866 CURTIS WOODWORK SILENTITE PRE-FIT the "Insulated" window

AR-3-54

CURTIS COMPANIES SERVICE BUREAU
200 Curtis Bldg., Clinton, Iowa

Please send literature on the Curtis Convertible Unit —and other Silentite windows.

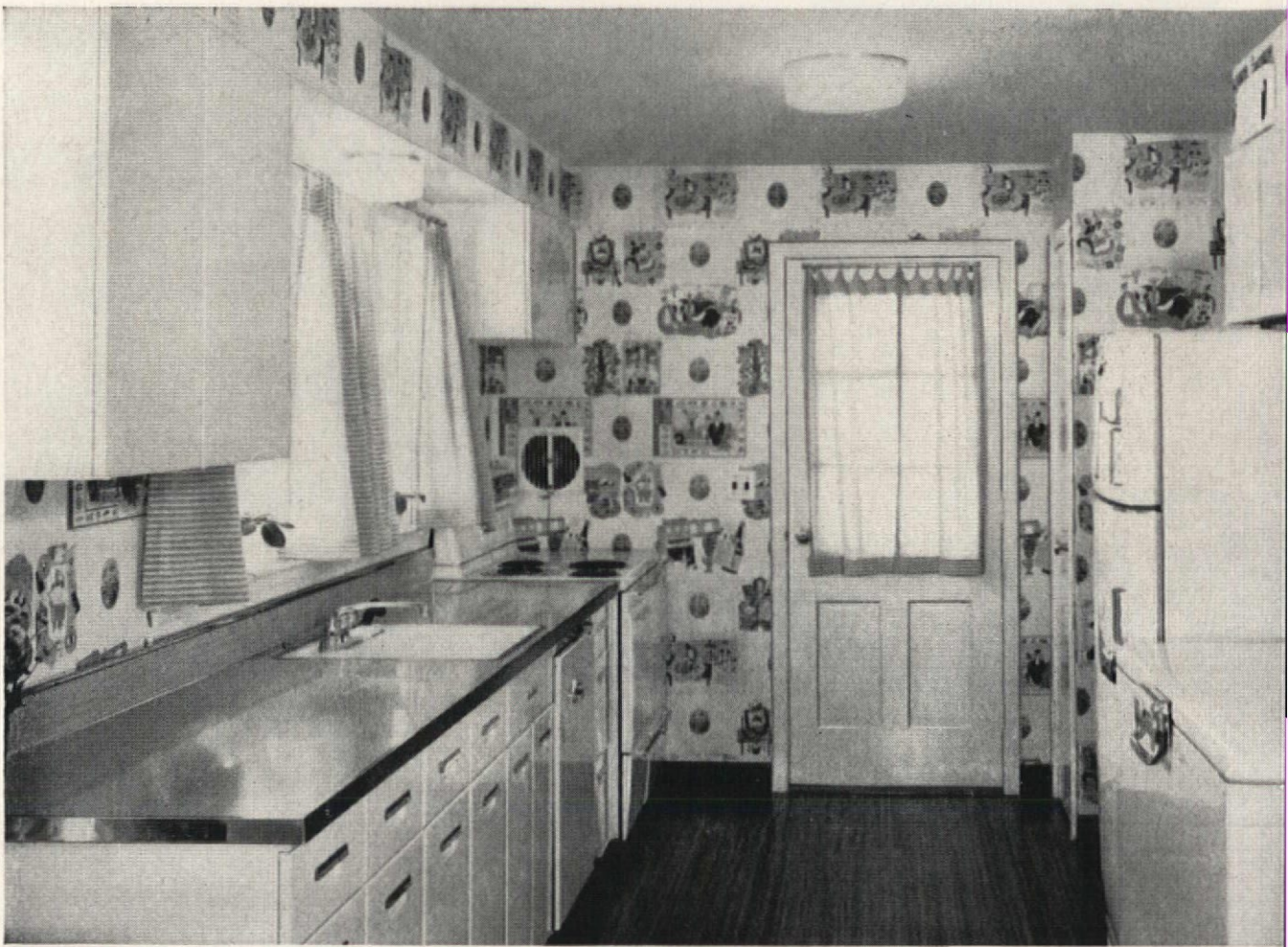
Name.....

Address.....

City.....

State.....

Sold 12 G-E "Young America"



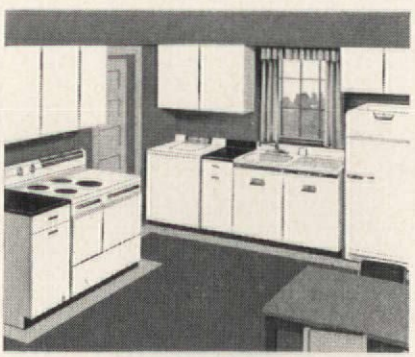
This is the kitchen of the Caplan General Electric "Young America" Home that helped sell so many houses. It contains: G-E Refrigerator, G-E Food Freezer, G-E Range, G-E Dishwasher, G-E Disposall,® G-E Automatic Washer and Dryer.

REGARDLESS OF PRICE RANGE, your houses can have a G-E Kitchen-Laundry

(See your G-E distributor for suggestions on merchandising your homes)

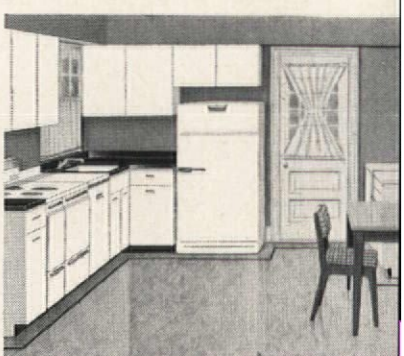
IN YOUR $9,995 HOUSES

Includes G-E Refrigerator, G-E Range, G-E Automatic Washer, G-E Disposall and G-E Cabinets. Adds as little as $2.98 monthly to mortgage payments.



IN YOUR $12,500 HOUSES

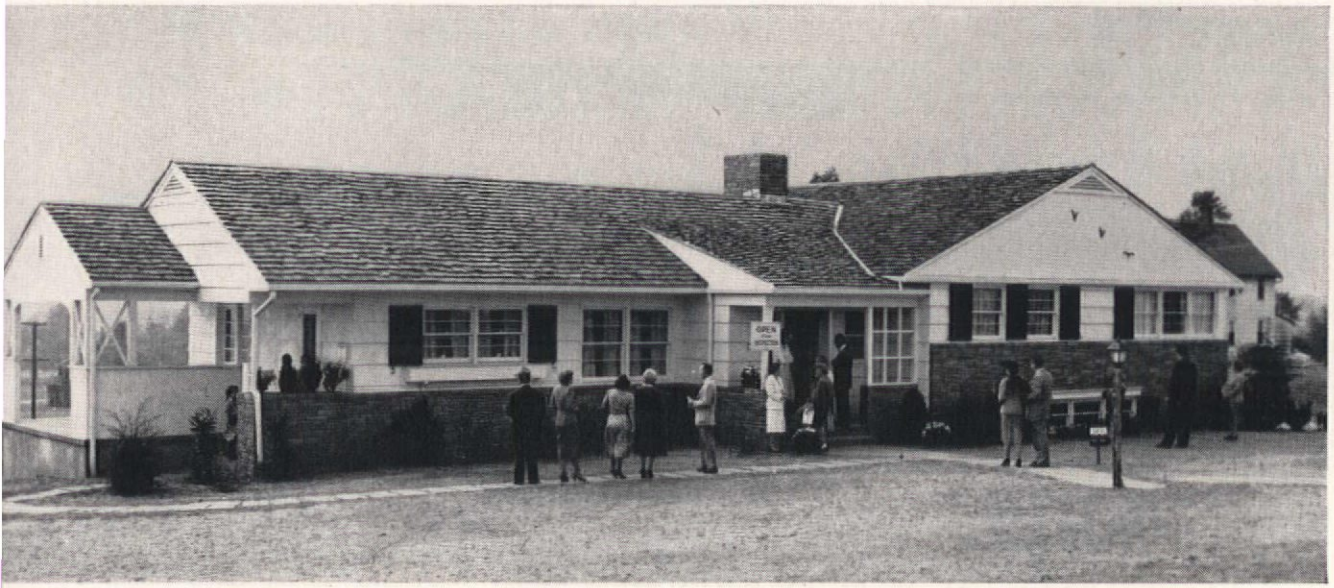
Includes G-E Refrigerator, G-E Range, G-E Dishwasher, G-E Disposall, G-E Automatic Washer, G-E Cabinets. Adds as little as $5.31 monthly to mortgage payments.



IN YOUR $16,000 HOUSES

Includes G-E Refrigerator, G-E Range, G-E Dishwasher, G-E Disposall, G-E Automatic Washer, G-E Dryer, G-E Cabinets. Adds as little as $6.31 monthly to payments.

Houses the first month!



THE REASON ?

Alexander Caplan's model home in Chatham Township, New Jersey was a G-E "Young America" House—erected by the builder from basic plans supplied by the Home Bureau of General Electric. The G-E Kitchen-Laundry particularly delighted prospects.

T WILL PAY you to investigate how helpful General Electric's Home Bureau can be in this new era of ɔugher selling—just as it has been to Mr. Caplan and ɛher successful builders throughout the country. Today ɛople are getting mighty choosy and want more for ɪeir money.

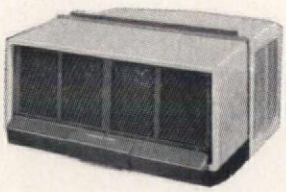
Just completed are specifications for 4 new "Young merica" Model Homes which contain features pros-ɛcts want most in their new homes . . . features *they ɯ afford.*

Outstanding among the "want-most" features is the ɪtractive General Electric Kitchen-Laundry.

The value of these dependable appliances can usually be included right in the regular mortgage, *and the monthly cost to the home owner is usually no more than that for a typical telephone bill.*

Builders in scores of cities are reporting phenomenal sales results of General Electric "Young America" Houses. Why don't you get all the facts through your General Electric distributor today?

Home Bureau, General Electric Company, Appliance Park, Louisville, Kentucky.



New G-E Room Air Conditioners at low per-unit cost! Models are easily installed. No plumbing required.

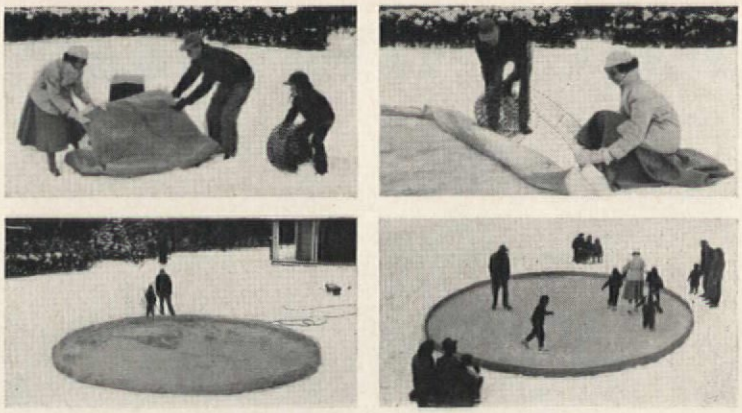
You can put your confidence in—

GENERAL ELECTRIC

(*Continued from page 234*)

PORTABLE SKATING RINK

A new, portable ice skating rink, weighing about 60 lbs for a diam. of 24 ft, quickly and easily converts a backyard, garden or lawn into a safe ice skating site for family and neighborhood. This skating rink is made of *Krene*, a product of the Bakelite Co., a division of Union Carbide and Carbon Corp. It takes only a few minutes to set up and is easily disassembled for folding into a compact package to store.



Assembling skating rink

Location for the rink is a reasonably level piece of ground, where the liner of *Krene* is unfolded and stretched over the ground (top left photo). Next the low fence is placed in position (top right photo) and then the flexible side wall of the liner is placed over the fence. The rink is then ready for filling with as little as two or three in. of water (bottom left photo) and, with the aid of cold weather, a safe ice skating rink is had. This new type skating rink is available in various sizes, including the standard 24 ft circular rink, shown, which costs $100. *Bilnor Corp., 300 Morgan Ave., Brooklyn 11, N. Y.*

FOLDING DOORS

A new product for space saving or room dividing has been manufactured by Extendoor Inc. *Extendoor with Extendible X*, a mechanism producing true pantograph action which controls the movement of the door at both the top and bottom resulting in uniform folds, is reportedly effortless to operate. The full length vertical panels give a permanent backing to the fabric folds, which are specially treated to prevent rust or mildew.

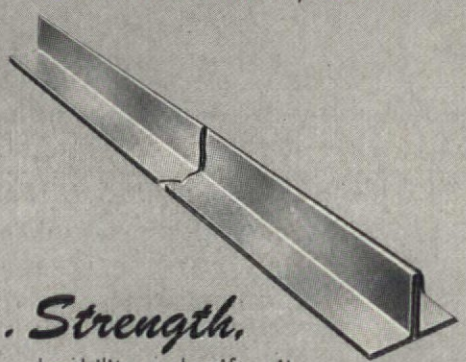
According to the manufacturer, these panels act as a sound trap, retarding normal noises, such as applause in an adjoining room, from bouncing back or penetrating through. The doors come in opening heights of 6 ft 8½ in. with opening widths from 2 ft 6 in. and 8 ft with opening widths from 7¼ in. to 20½ in.

Extendoor offers a wide range and variety of Vicrtex V.E.F. fabrics, colors and textures. *Extendoor, Inc., Muskegon, Mich.*

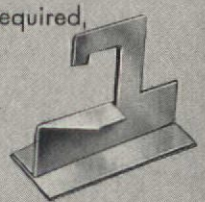
(*Continued on page 242*)

if

..Quality in product
is what you are seeking
then look to Securitee Systems.



..Strength,
durability and uniformity
in each component part is required,
specify Securitee Systems.



..Information
about the finest
mechnical suspension system for the
installation of acoustical units
is what you want,
send in the coupon below.

Securitee SYSTEMS

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FREY & HAERTEL
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W. J. HAERTEL & CO.
832 W. Eastman St., Chicago 22, Ill.
Please send me complete technical data on your Securitee Systems.

Name_____
Company_____
Street_____
City_____ State_____

*T.M. Reg. U.S. Pat. Off.

Mosaic Impervious Conductive Floor Tile, Pattern No. 1778-A3, in Operating Rooms, etc., Fitkin Memorial Hospital Addition, Neptune, N. J. New size 9″ x 6″ x ½″ Mosaic Glazed Wall Tile, color No. 400 Hospital Gray-Green. Ferrenz & Taylor, Architects. A. Tozzini Tile Works, Inc., Tile Contractor. Photo: Martin Helfer.

test-proved for safety, sanitation, permanence . . .

Mosaic IMPERVIOUS CONDUCTIVE Floor Tile!

The Mosaic Tile Company's Impervious Electrically-Conductive Ceramic Mosaic Floor Tile is unglazed, dust-pressed, square edge, porcelain-type, 1-9/16″ x 1-9/16″ x 1/4″ tile. It was developed specifically to reduce the danger of anesthesia explosion resulting from spark discharge or electrical shock in surgical or obstetrical suites.

It meets the resistance limitations of June, 1952 N.F.P.A. No. 56 "Recommended Safe Practice for Hospital Operating Rooms." Efficiently dissipates static electricity and prevents accumulation of dangerous electrostatic charges by providing moderate electrical conductivity for all personnel and equipment in electrical contact with the floor. Every tile is conductive. Beautiful neutral warm brown color has a low light-reflection factor, restful to the eye. Every shipment is fully covered by Warranty of The Mosaic Tile Company.

SETTING Set with flush joints of gray non-conductive waterproofed portland cement, by modified-conventional method, in pulverized conductive cement mortar bed (requires 1-1/4″ min. depth below finished floor). Or, for alteration without structural change, set in a thin-setting bed of conductive adhesive (increases existing floor line approx. 5/16″).

MAINTENANCE Impervious to moisture, stain or insulating contamination. Easily maintained to highest standards of sanitation by scrubbing, rinsing to remove detergent film or talc and dry-mopping.

No loss of pre-tested conductive properties . . . ever. Never needs replacement because it has all the unequalled qualities of regular Ceramic Mosaic Tile.

In addition to the surgical and obstetrical suites of the new Addition, Fitkin Memorial Hospital has protected the anesthetizing areas in the original buildings with Mosaic Impervious Conductive Floor Tile, set with conductive adhesive over existing floors, without structural change.

The new large size 9″ x 6″ x 1/2″ Mosaic Wall Tile is the ideal tile for permanently sanitary, easily maintained, attractive wainscots in large areas.

For Mosaic Impervious Conductive Floor Tile installation specifications and performance test reports, call your Mosaic Representative, or write Dept. 30-20, The Mosaic Tile Company, Zanesville, Ohio.

For Free Estimates on (MOSAIC) Tile, see your phone book for the name of Your Tile Contractor (Ceramic)

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THE MOSAIC TILE COMPANY

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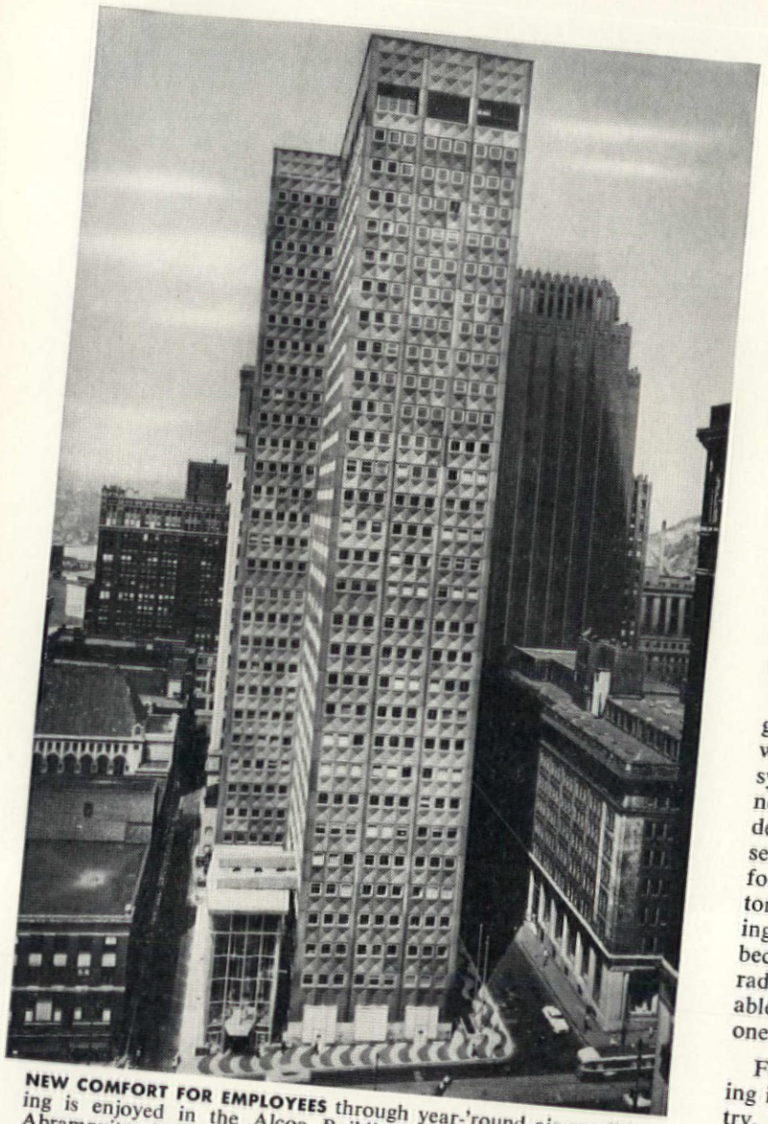


NEW COMFORT FOR EMPLOYEES through year-'round air conditioning is enjoyed in the Alcoa Building. Architects Harrison and Abramovitz chose a Worthington system for maximum performance. Installation by Dravo Corporation, Pittsburgh. Engineers: Jaros; Baum & Boles, New York. Assoc. Architects: Mitchell & Ritchey and Altenhof & Bown, Pittsburgh.

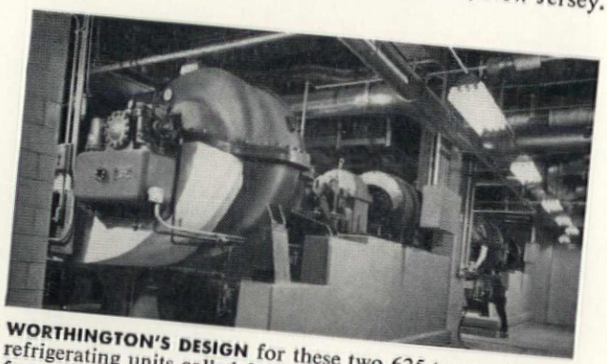
New idea in air conditioning adds 1½ floors of rentable space to aluminum building

Displaying aluminum exterior walls and featuring aluminum throughout, Pittsburgh's new Alcoa Building sets a high point in advanced construction methods and materials. And it is fitting that the heating and cooling requirements are met by the first system of its kind in the country.

Crimped to perforated aluminum ceiling panels, a grid of aluminum tubing circulates hot or cool water for winter or summer. Chilled water in this panel cooling system meets half of the summer's air conditioning needs. For the balance of the cooling and for all dehumidification, primary air fans in three locations service local mixing units on each floor. Chilled water for both systems is supplied by two Worthington 625-ton centrifugal refrigerating units — each unit consisting of a compressor, condenser and water chiller. And because this new air conditioning system eliminates radiators and their extensive piping, the building's rentable area is increased by the equivalent of one and one-half floors.

For over half a century, Worthington air conditioning installations have been serving business and industry. Today, the complete Worthington line can meet any assignment, large or small. So when you think of air conditioning — think of Worthington. Get in touch with your nearest Worthington district office or write to Worthington Corporation, Air Conditioning and Refrigeration Division, Section A.4.32, Harrison, New Jersey.

WORK-SPEEDING METHODS, such as this new way of crimping aluminum ceiling panels to water-circulating aluminum tubing resulted in fast completion.



WORTHINGTON'S DESIGN for these two 625-ton centrifugal refrigerating units called for special finned aluminum tubes for condensers and coolers.

A.4.32

WORTHINGTON

CLIMATE ENGINEERS TO INDUSTRY, BUSINESS AND THE HOME

Pre-finished Craftwall

PANELING AND MATCHING TRIM BY

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FOR BEAUTIFUL INTERIORS . . . FAST COMPLETIONS . . . LOW LABOR COSTS!

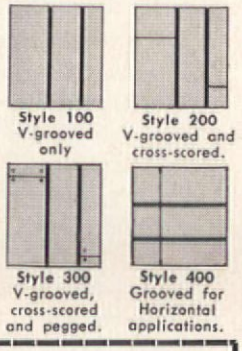
Birch Craftwall, Style 100

Pre-finished hardwood plywood panels in Birch, Maple, Oak, Walnut, Mahogany, Cherry or Blonde Limba . . . random matched for the effect of luxurious solid wood!

BEAUTIFUL Craftwall adds tremendous appeal to interiors . . . wins acclaim for architects and designers whenever it's used. And it speeds jobs through, too. There's no matching necessary, no more finishing to do. No time lost plastering, painting or papering . . . and you have perfectly finished paneling on every installation!

Offered in 4 styles, 3 sizes—with matching hardwood trim!

Craftwall offers you a complete package . . . endless design opportunities for new construction or remodeling. There are panels for vertical use, and panels for horizontal use. Panel sizes are 48″ x 96″ x ¼″ . . . 16″ x 96″ x ¼″ . . . 32″ x 64″ x ¼″. Four distinctive styles . . . seven beautiful hardwoods. A full line of hardwood moldings, with materials for matching Craftwall finishes. For full details on Craftwall, send the coupon below today!



Style 100 V-grooved only

Style 200 V-grooved and cross-scored.

Style 300 V-grooved, cross-scored and pegged.

Style 400 Grooved for Horizontal applications.

Roddiscraft RODDIS PLYWOOD CORP.

Marshfield, Wisconsin

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Yes, send me the facts on Craftwall — and matching trim in genuine hardwoods.

NAME .....
(Please print)

ADDRESS .....

CITY ..... STATE .....

(*Continued from page 238*)

DRAFTING TOOLS

• A new model device that reportedly combines the functions of T-square, triangles, straightedge, scales and protractor, or drafting machine, in one unit without adjustments or additional parts, Paraline weighs less than 4 oz. It may be used on any flat surface or to speed up detail work on very large drawings where drafting machine or T-square are used on the drawing board. Angles and tangents are projected by aligning the transparent protractor anywhere along the base line and rolling the instrument until the straight edge intersects the base line at the point at which the angle is to be drawn. Parallels are scaled without raising the device. The new *Professional Model Paraline* is 12½ by 3½ in. and is available with either architect's or engineer's scales at $5.50. The *Standard Model Paraline* measures 10½ by 3 3/16 in., is available with Architect's scale at $3.95. *Pickett & Eckel, Inc., 5 So. Wabash Ave., Chicago 3, Ill.*

• A portable drawing board molded of clear polystyrene plastic weighs less than 8 oz and will fit into a briefcase. According to the manufacturer four corner clamps for attaching 8½- by 11-in. paper assure smooth handling of the working sheet without use of thumbtacks or scotch tape. The clamps are recessed into the plastic so that a triangle or ruler can ride freely over them without interference. Two metal straightedges, horizontal and vertical are retractable to facilitate precision work without use of a T-square. Tension clamps on the under side of the board provide storage for triangles. The board measures 9¾ by 12¼ in., can be used for tracing and shadow box work and retails for $3.95. *The Graphostat Co., 110 Eaton Pl., East Orange, N. J.*

Lightweight portable drawing board

• A new precision drawing instrument, now available to the export market reportedly enables a person with little previous knowledge or experience of drawing to make sketches, plans or other outlines rapidly and accurately to scale. The appliance consists of a light rigid board contained in a leather folder, 14 in. square, to which is attached a plastic pantograph with a template so shaped as to enable lines to be ruled horizontally, vertically and all principal angles, including those required for isometric or perspective drawing. The template is also cut to produce varying angles, triangles and rectangles with gradations in inches and millimeters and circles from ⅛ in. to 1 in. diameter. Although this instrument reportedly can be used for a wide range of work without additional instruments, compasses, set squares, and protractors can be used in conjunction with the appliance. Price of $11.50 includes postage, packing and insurance. *Quikdraw Co., Ltd., 127 Gunnersbury Ave., London, W.3, England.*

(*Continued on page 246*)

MICHAELS
BRONZE PLAQUES

Any size, any shape, any design. Plaques for public buildings, lobbies, offices, parks and playgrounds, for memorials, name plates for desks, tellers' windows, and any other purpose. Michaels plaques are made of genuine bronze with lettering, borders and ornamentation hand chased and burnished for contrast. Tell us what you need, and we'll be glad to furnish sketches and quotations without cost or obligation. Write for illustrated literature.

Michaels also manufactures a wide range of building materials in aluminum, bronze and stainless steel, Time-Tight display cases, and parking meters. Literature is available for these products.

MICHAELS PRODUCTS

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Robert A. Wesche is a hardware consultant employed by Clark-Darland Builders' Supply Co. of Tulsa, Oklahoma. Like most hardware consultants, Mr. Wesche works for architects every day. He is frequently called upon for that particular special knowledge that comes from long and varied builders' hardware experience.

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ARCHITECTS, ENGINEERS and ADVERTISERS AGREE ON THE RECORD...

Architects and engineers prefer Architectural Record

1 It is the one magazine edited *specifically* for them. (Architectural Record editors—like building product advertisers—know that the best way to win the preference of architects and engineers is to talk to them in their own language and directly in terms of their own special interests.)

2 Architectural Record editors cover thoroughly (with over 1300 pages in 1953) the *full range* of building design—nonresidential and residential buildings, small and large buildings—that comprises the practice of architects and engineers.

3 Equally important to architects and engineers—Architectural Record is the one magazine whose editorial content is *timed* and *balanced* (with the aid of Dodge Reports of building planning activity) to be of constant maximum use to them *in terms of the work on their boards.*

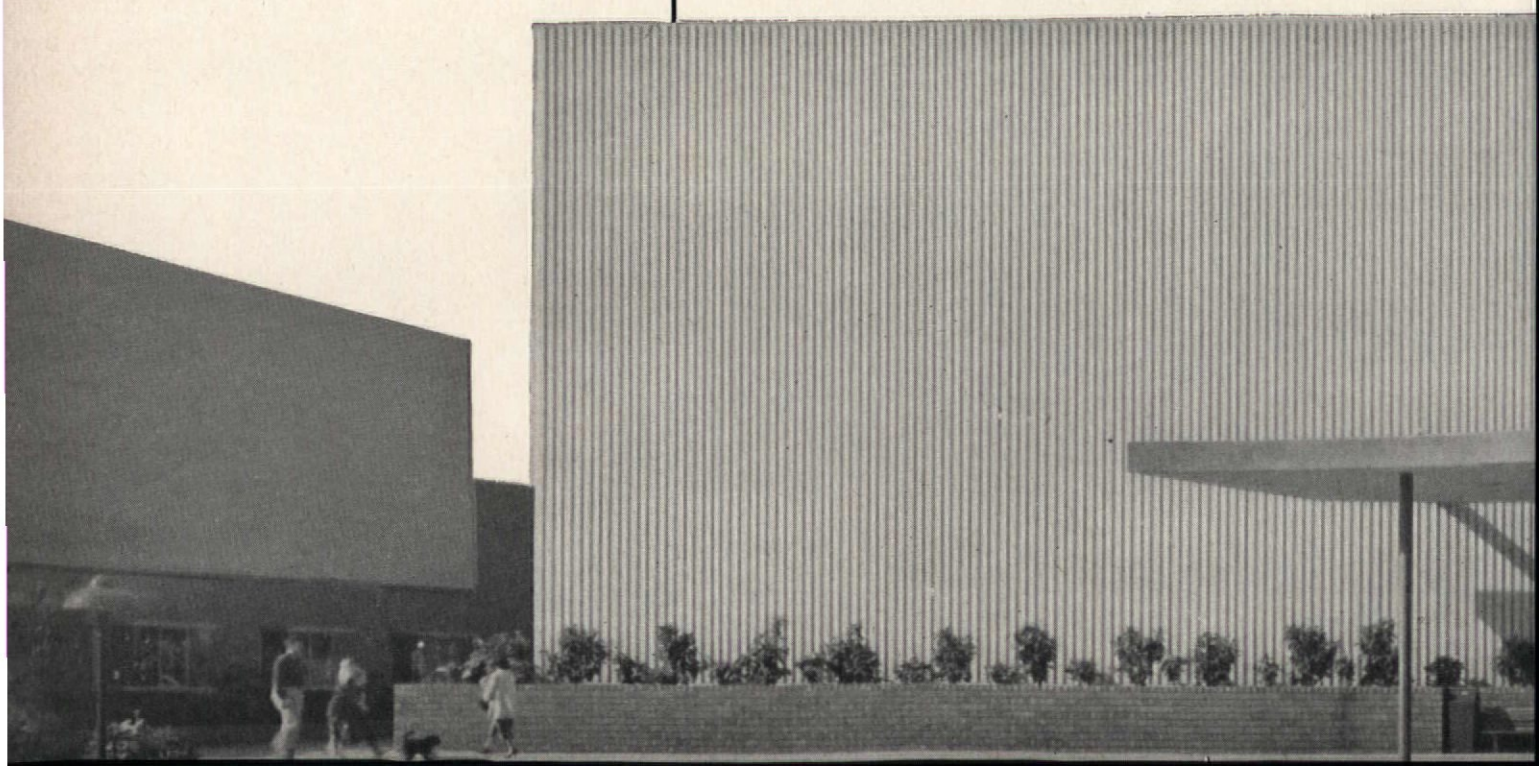
Building product advertisers prefer Architectural Record

Its concentrated editorial service to architects and engineers has resulted in three exclusive advertising values:

1 *Greater readership:* Architects and engineers (the men whose specifications determine which building products four out of five building dollars will buy) have voted Architectural Record their preferred magazine in 51 out of 58 readership studies SPONSORED BY BUILDING PRODUCT MANUFACTURERS AND ADVERTISING AGENCIES.

2 *Dodge-documented coverage of over 85% of the architect-designed building market*—including all types of nonresidential and residential buildings, both small and large.

3 *Largest architect and engineer circulation:* Architectural Record provides the largest audience of architects and engineers ever assembled by a technical magazine—*at the lowest cost per page per thousand.*



In 1953,
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advertisers put Architectural
Record ahead of the field
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of advertising—the
widest margin
in history!

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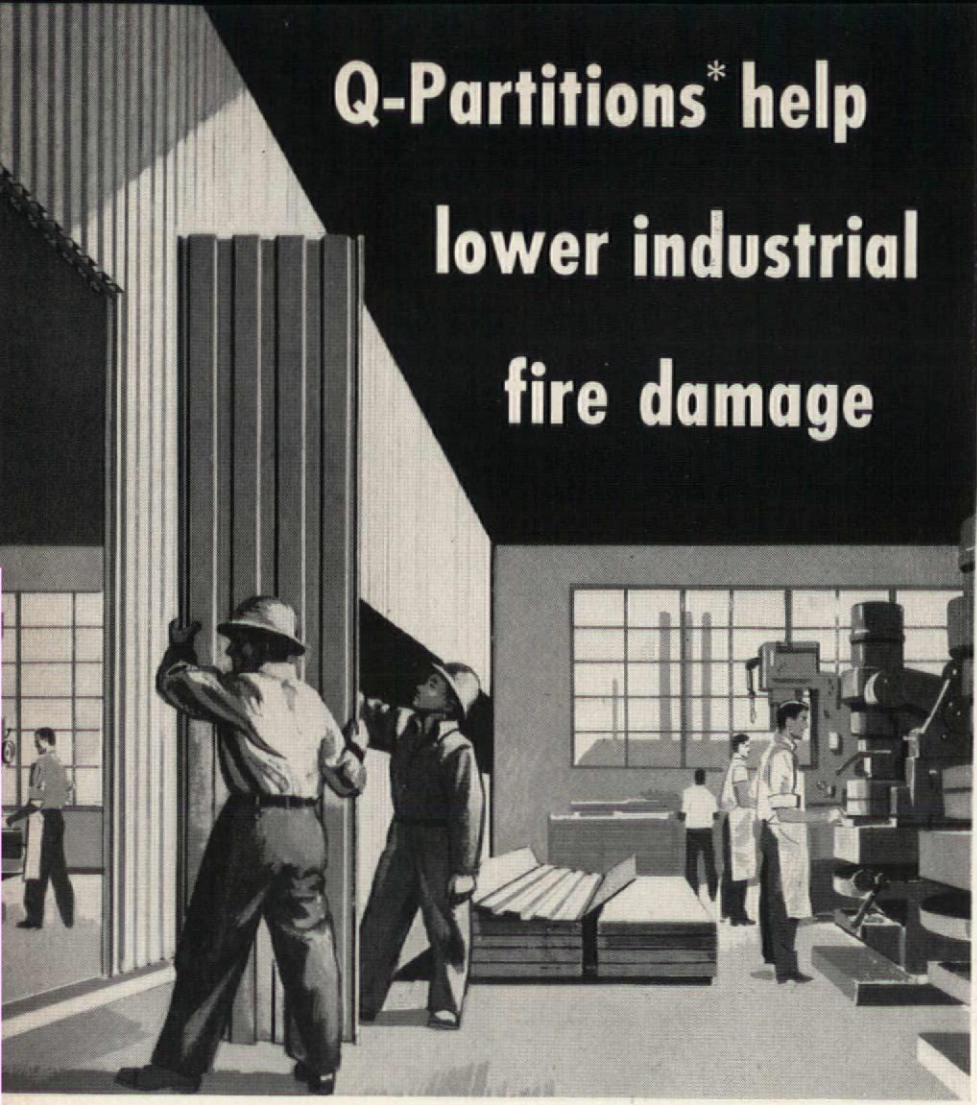
Emporium Department Store, Stonestown Center, San Francisco, Calif. First presented to architects and engineers in Architectural Record. Architects and Engineers: Welton Becket F.A.I.A. and Associates. Photographer: Robert C. Cleveland.

Q-Partitions* help lower industrial fire damage



Fire prevention experts agree that one way to prevent costly industrial fires is to reduce large areas by the use of fire-resistive partitions. By doing so, fires that would tend to spread swiftly can be contained in a smaller area where they can be fought more effectively and brought under control. Robertson Two-Hour Fire Resistive Q-Partition is ideal for this purpose. Its installation will not interrupt production schedules . . . it is quick, clean, dry construction. It goes up while production goes on. And because it is clean and dry, there is no discomfort to employees, nor is there danger of dirt and dust injuring precision instruments or machines.

Robertson Q-Partition units arrive at the job-site ready for installation, and require a minimum of field work, scaffolding and working space. *They are easily and quickly demounted and re-erected elsewhere,* giving a freedom of planning and layout not possible with other types of construction. They are good looking and have a high factor of light reflection. A Robertson Two-Hour Fire Resistive Q-Partition unit consists of two 18 gauge rolled steel fluted sections (each 1⅝" deep) between which is sandwiched 1½" (three ½" layers) of gypsum board. Each unit or panel is 24" wide and made in lengths up to 22'0". Robertson Q-Partitions are listed and approved by Factory Mutual Laboratories. Write for literature.

Robertson

***Two-Hour Fire Resistive**

Q-PARTITIONS*

a product of **H. H. Robertson Company**

2404 Farmers Bank Building • Pittsburgh 22, Pennsylvania

In England—Robertson Thain Limited, Ellesmere Port, Cheshire

In Canada—Robertson-Irwin Limited, Hamilton, Ontario

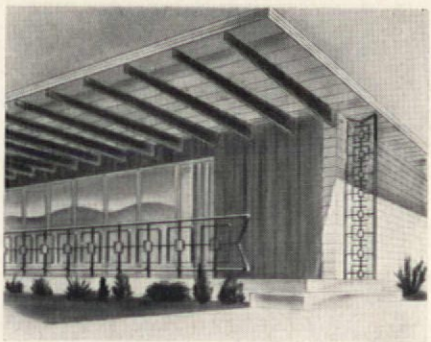
World-Wide Building Service

A-E PRODUCTS

(*Continued from page 242*)

ORNAMENTAL RAILINGS, COLUMNS

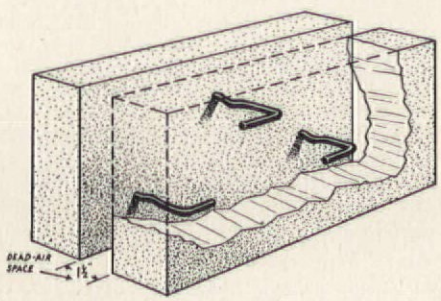
Kleesons, Inc., offer seven contemporary designs in ornamental iron and aluminum. Produced in pre-drilled units, easily assembled, the line was designed for ornamental work to harmonize with contemporary buildings and dwellings. *Kleesons, Inc., 500 W. Main St., Robertsville, Ohio.*



New railings in contemporary design

CONCRETE BUILDING BLOCKS

Twin-Sul Block consists of two separate, light-weight concrete blocks joined together by three galvanized ¼-in. diameter steel rods, which provides a cavity wall in one operation. The manufacturer claims that the bricks are moisture proof and, due to the dead-air space, insulated. Because of the dry surface, it is possible to plaster directly to the wall.



Double block gives dead air space

The blocks are 8 by 8 by 16 in., each 3⅛ by 7⅝ by 15⅝ in. *Twin-Sul Block Co., 137 E. 29 St., New York, N. Y.*

(*Continued on page 247*)

AIA PRODUCTS

(*Continued from page 246*)

NEW SHOWROOM FOR FURNITURE COLLECTION

The Continental American Collection of furniture, designed by E. J. Spence for Industria Mueblera of Mexico, is now being housed in new, larger quarters. The showroom, designed by Fred Wuntch, occupies 3500 sq ft of space, and is so arranged to provide individual room settings for the various furniture items. The furniture collection, having grown from 32 pieces when first introduced in June 1952 to the present 110

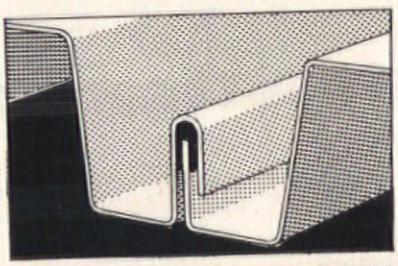
New furniture line features fine materials, Mexican handicrafts

pieces, consists of living, dining and bedroom furniture in a variety of lamp, cocktail, corner and coffee tables, nests of tables, dining tables, beds, chests, double and triple dressers, cabinets, breakfronts, chairs, etc. The furniture, all made of solid mahogany, is available in several finishes which include, mellow briar, honey amber, Rosa Morada, mother of pearl, ebony and teak. Some of the items are trimmed with solid

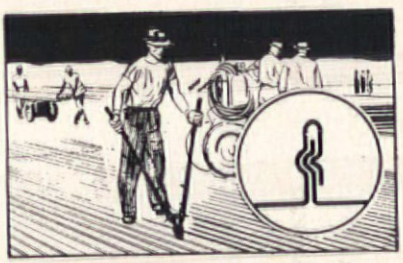
(*Continued on page 251*)

Quickly erected Q-Deck helps lower roof fire hazard

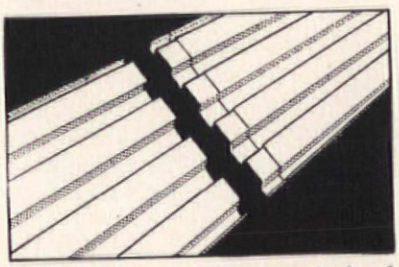
The many unique features of Robertson Q-Deck make it of special interest to the architect and engineer who is concerned about the fire hazard aspect of his flat roof design. To begin with, Robertson Q-Deck is designed with tight side and end laps to eliminate the need for an inflammable vapor seal. Its two-foot width and long span characteristics mean fewer joints, and its zinc-coated surface (or basic Galbestos) eliminates the need for field painting.



Robertson Q-Deck side laps are designed to form a standing seam. A seal in the form of a continuous caulking material assures a vapor-tight joint.



A special Robertson clamping tool mechanically fastens the side laps together, forming a steel fire barrier that remains intact as long as the structural supports are in place.



Ends of Robertson Q-Deck are sized and countersunk to produce a tight, smooth, two-inch lap joint. This lap, along with the tight side laps, provides a vapor-sealed roof construction.

Excessive amounts of asphalt are eliminated on Robertson Q-Deck because the adhesive is applied to the *insulation . . . not to the steel deck.* This also results in a better bond between the steel and the insulation.

Robertson

Q-DECK

a product of **H. H. Robertson Company**

2404 Farmers Bank Building • Pittsburgh 22, Pennsylvania

In England—Robertson Thain Limited, Ellesmere Port, Cheshire

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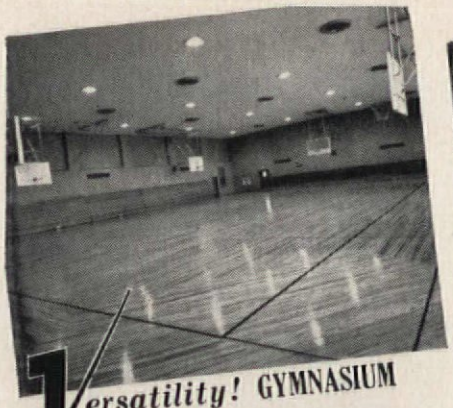
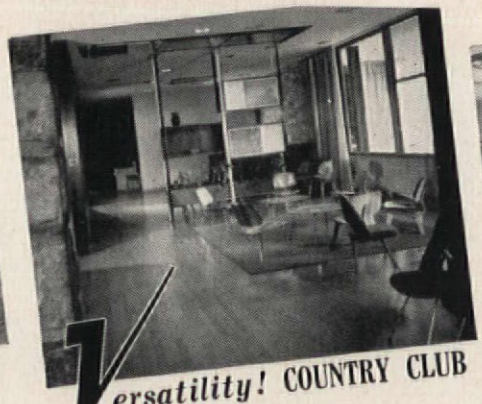
World-Wide Building Service



Versatility! GYMNASIUM



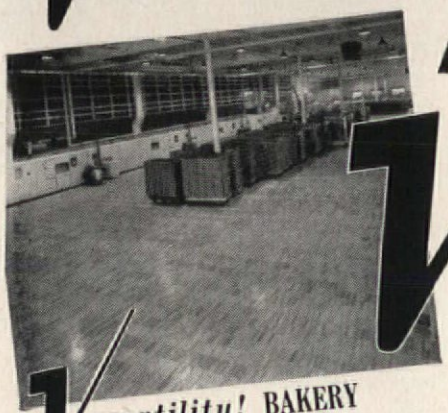
Versatility! COUNTRY CLUB

Versatility! CLASSROOM

ALL FLOORED with

Versatile!

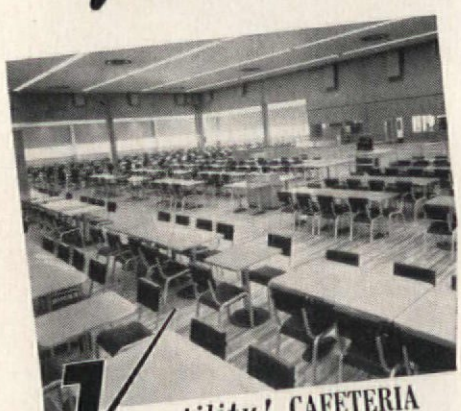
NORTHERN HARD MAPLE



Versatility! BAKERY

Versatility! WAREHOUSE

Versatility! STORE



Versatility! CAFETERIA

Versatility! BEDROOM

Versatility! TEXTILE MILL

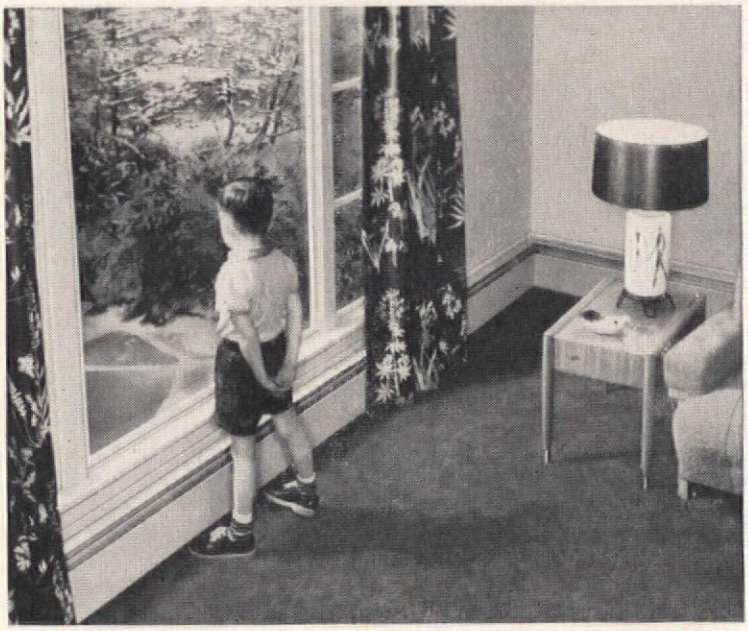
Neither science nor Nature herself has yet produced a flooring material that serves so many varying needs so well and so long as *resilient* Northern Hard Maple. Here are nine typical areas where maple is a normal, and eminently sound, specification. There are a great many others. Produced in strip, block and patterned designs, under strict **MFMA** grading and dimension regulations, and properly laid, maple serves for years with simple, routine maintenance. It's tough—asks no babying. It's bright, smooth, tight, crevice- and splinter-free. Specify it with the confidence it has earned so well. See Sweet's Arch. 12k-MA, or write for AIA full-color File Folder.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
Suite 550, Pure Oil Building
Chicago 1, Illinois

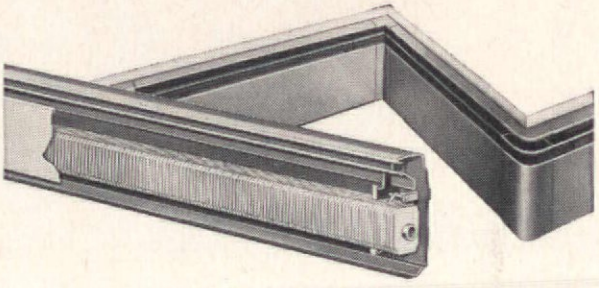
FLOOR WITH *NORTHERN* HARD MAPLE
BEECH AND BIRCH

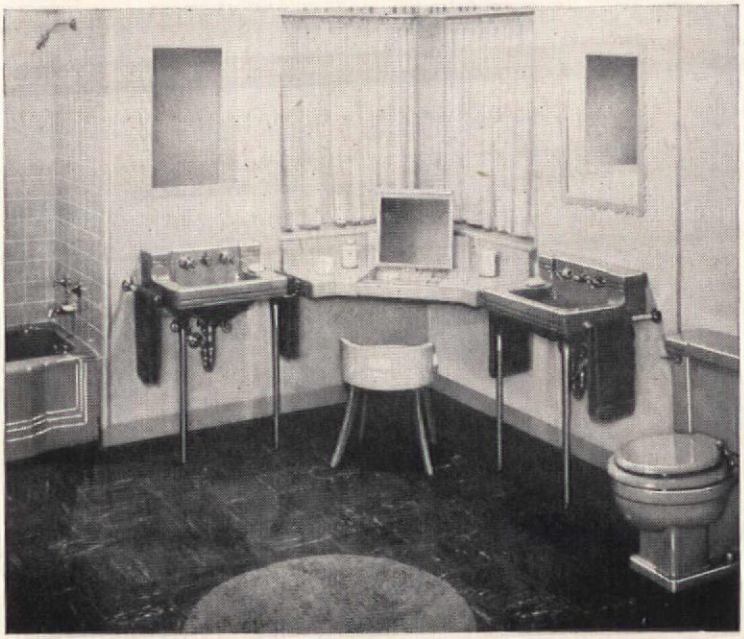
PRODUCT NEWS from AMERICAN-Standard

A review of products in the news and important features worth remembering



HEATRIM PANELS are the modern way of providing comfortable, even, convected warmth throughout an entire room. They are specifically designed for forced-circulation hot water heating. Taking the place of conventional wood baseboards, Heatrim panels save floor space, leave walls unbroken, permit greater latitude in decorating. They can be installed against existing walls or recessed to the depth of the plaster. They are perfect for use under picture windows . . . are also much in demand for premium-space installations.





NEW-DESIGN PLUMBING FIXTURES by American-Standard are more beautiful, more convenient than ever. You can choose from a variety of genuine vitreous china lavatories and toilets styled to match the trim, horizontal lines of famous American-Standard cast iron bathtubs. They're unusually convenient to use and easy to keep clean. All embody the same top quality that assures owner-satisfaction with the homes you design or build. New-Design fixtures are available in a variety of colors as well as white.

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AMERICAN-Standard

American-Standard
Dept. AR-34, Pittsburgh 30, Pa.

Without obligation on my part, please send me literature on:

☐ Heatrim Panels
☐ New-Design Plumbing Fixtures

Name .....

Address .....

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City ..... State .....

American Radiator & Standard Sanitary Corporation, Dept. AR-34, Pittsburgh 30, Pa.

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New way to solve old problem in hospital communications

Never seem to be enough nurses to serve all patients' needs even in the most modern of hospitals. That's why smart administrators save nurses steps, time and trouble by adding audio nurses' call systems when building a new structure or adding more beds.

The master stations in the Edwards' Nurses Call Systems are only half the size of most other units because each key does double duty—covers *two* patients. The feather-touch button in the hand set leaves the nurse's other hand free for note-taking. Strict privacy is assured, as the super-sensitive Stromberg-Carlson amplifier is specially designed to pick up the slightest whisper from the patient's bed; on the other hand, the patients cannot overhear conversation at the nurse's station.

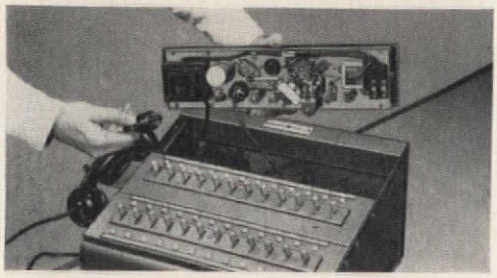
Like to know more about Edwards' Nurses Call Systems? For facts, figures, full information write for Bulletin HO today or see our catalog in Sweet's Architectural File. Edwards Company, Inc., Dept. AR-3, Norwalk, Conn.

Precision-built for Long Life and High Efficiency

1. Rugged, dynamic telephone transmitter.
2. Three-level Volume Control steps up weakest voice . . . no fumbling with dials.
3. Long Life Telephone Switchboard Lamps.
4. Telephone-type Double Throw Cam Keys.
5. Smart, attractive office-gray finish.
6. Choice of 12, 24, 36 or 48 Stations.
7. Two-Stage Class A Amplifier built into station . . . plug-in feature for quick servicing.
8. Flexibly engineered to meet any requirements.
9. Edwards privacy feature means patients cannot be by-passed. Monitor or Reset at Nurses' Station also available when specified.
10. Can be serviced by any qualified electrical maintenance man. No expensive specialists required.

Compare this system with any other on the market. Check design, construction, wiring, performance, and you'll choose Edwards.

Safety at her Fingertips! The mere touch of the bedside button activates the Edwards Wall Speaker, so sensitive that the patient doesn't even have to turn her head to be heard.



"Inside Story" . . . Plug-in connections allow built-in amplifier to be removed easily for service. Tubes replaced by simply removing screen ventilating grill at rear of cabinet.

EDWARDS

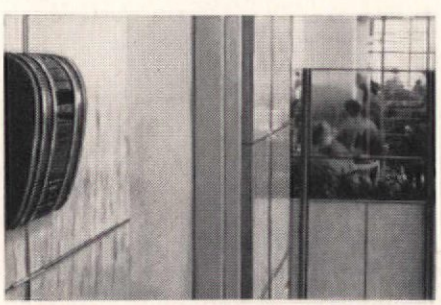
World's Most Reliable Time, Communication and Protection Products for Schools, Hospitals, Industry and Homes.

SAVES STEPS, TIME, EFFORT...

Edwards Soft Speaking Nurses' Call System makes life easier for nurse *and* patient. Patient can make known her needs before nurse goes to bedside.

SPLIT-SECOND ACCURACY!

Every clock — one, ten or a hundred—tells precisely the same time, thanks to Edwards centrally controlled Clock and Program Systems. No Master clock is needed. Write for Bulletin "CL" or see our catalog in Sweet's Architectural File.



TRIM, MODERN, EFFICIENT:

Edwards Fire Alarms are chosen by leading architects to protect America's most important buildings.

EDWARDS

protects..everywhere!

AIA PRODUCTS

(*Continued from page 247*)

Mexican silver, and palm leaves have been intricately woven for use in some of the cabinets, and chairs. Marble, onyx and Mexican mosaics are used as table tops, and some of the chairs have been upholstered in choice hides, carefully tanned and cut, and laced on the backs and seats. *Industria Mueblera, 1218 Second Ave., New York, N. Y.*

PLYWOOD BUILDING PANEL

Douglas Fir Plywood Association announce the manufacture of plywood panel material suggested for siding of homes and buildings, gable ends, soffits and breezeways, and for interior effects. The panels, known as Texture One-Eleven, are unsanded, C-quality Douglas fir veneer, manufactured with 100 per cent waterproof glue, permit tight knots up to 1½ in.; knot holes up to 1 in.; and splits up to ⅛ in. The faces are free from patches and tape.

The panels come in two patterns 16/2 and 32/4. The 16/2 pattern is of panels 16 in. wide net (16⅜ in. over all) with grooves four in. o.c. The 32/4 pattern is of panels 32 in. wide net (32⅜ in. overall) with grooves 4 in. o.c. Grooves are ⅜ in. wide and ¼ in. deep. All panels are rabbeted both edges to provide hidden joints (shiplap) and make another groove at each joint. Rabbet is 5/16 in. deep, width of rabbet on face side is ¾ in. and on reverse side ⅜ in. The panels are also available in a 16-in. size with grooves 4 in. o.c., and 32-in. panels with grooves 2 in. o.c. They come in lengths of 96 in. and 120 in. Shorter lengths are also available.

The manufacturer recommends that Texture One-Eleven be stained rather than painted. *Douglas Fir Plywood Association, Tacoma 2, Wash.*

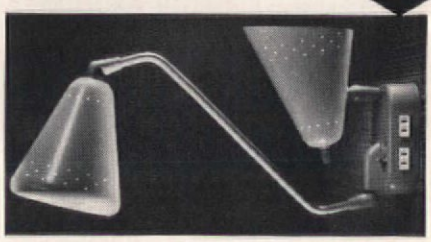
HIGH FIDELITY WALL CABINET

Recently designed by Florence Knoll, a new cabinet to house a high fidelity radio tuner, amplifier and three-speed automatic player has the same dimensions as other standard *Knoll* cabinets. Finished in birch with pull-out doors on one side, and grass cloth covering the speaker unit on the other side, the cabinet measures 72 by 15 by 18-in. high, and has been designed for attachment to the wall. The speaker enclosure is reported to insure good sound reproduc-

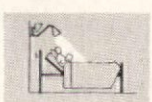
(*Continued on page 254*)

kurt versen

HOSPITALITY LIGHT makes one outlet do the work of 5



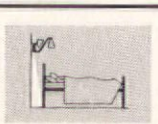
The new "Hospitality Light" provides patented flexibility heretofore unknown in hospital room lighting. Combining all facilities in one master outlet mounted on the wall behind each bed, it includes in one compact unit:



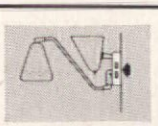
1 *Reading light on double swivel arm, adjustable to any patient position.*

2 *Indirect light for pleasant, home-like illumination.*

3 *Examination light is simply the indirect light tilted downward on its swivel.*



4 *Night light in housing directs fan-shaped beam behind bed.*



5 *One or two convenience outlets for electrical appliances.*

The "Hospital Light" is plugged into a wall-mounted receptacle fitted to a master outlet.

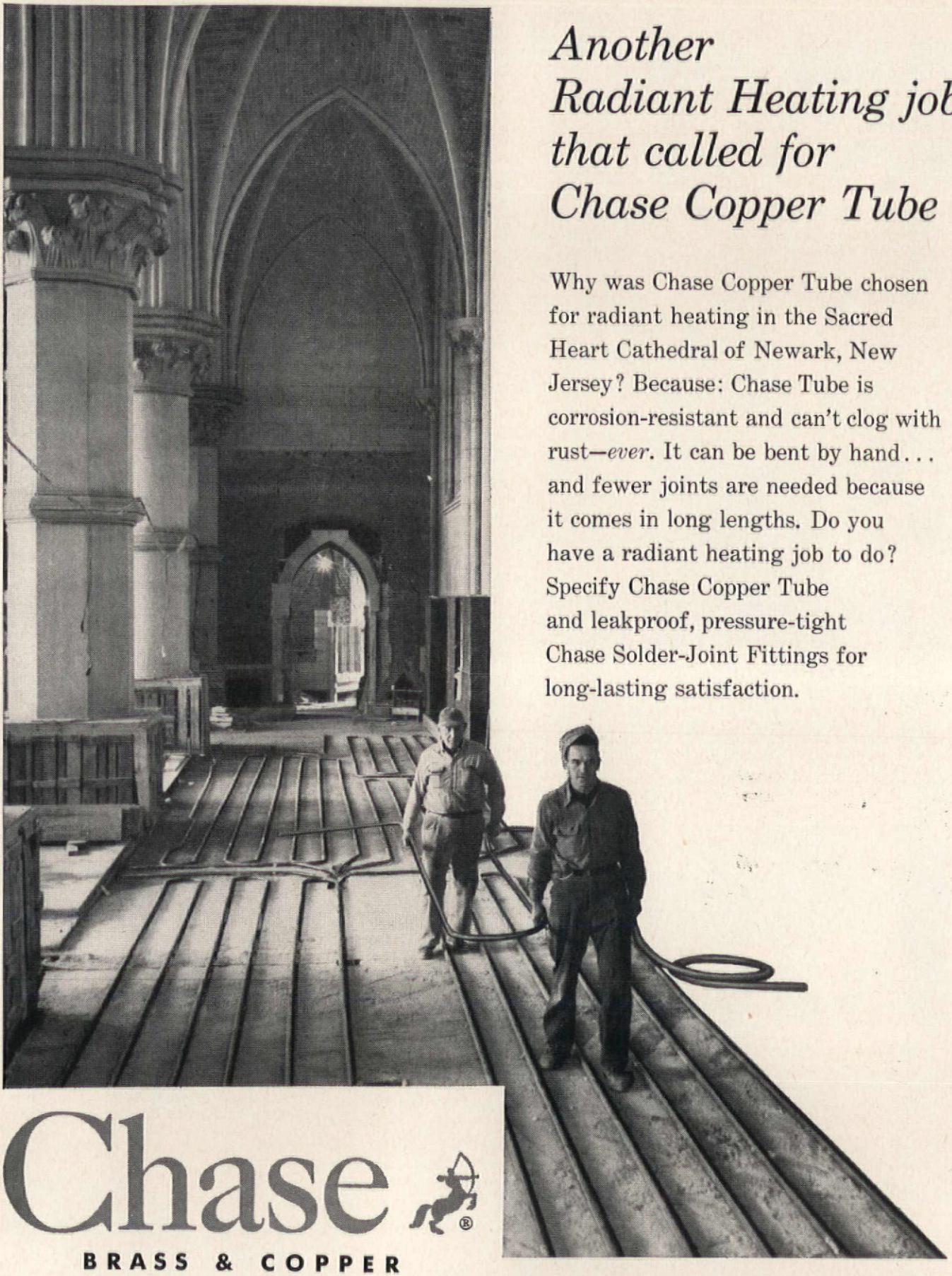
It takes just one minute to remove and replace it with a spare for easy maintenance.

A Kurt Versen field engineer will gladly demonstrate how the "Hospitality Light" gives you the utmost in hospital lighting efficiency. Write for full information including specifications and name of our field engineer nearest you.

kurt versen company

englewood, n. j.

contemporary lighting



Another Radiant Heating job that called for Chase Copper Tube

Why was Chase Copper Tube chosen for radiant heating in the Sacred Heart Cathedral of Newark, New Jersey? Because: Chase Tube is corrosion-resistant and can't clog with rust—*ever*. It can be bent by hand... and fewer joints are needed because it comes in long lengths. Do you have a radiant heating job to do? Specify Chase Copper Tube and leakproof, pressure-tight Chase Solder-Joint Fittings for long-lasting satisfaction.

Chase ®

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Baltimore	Cleveland	Houston	Milwaukee	New York	Rochester†	Waterbury
Boston	Dallas	Indianapolis	Minneapolis	Philadelphia	St. Louis	(†sales office only)

or graceful grain patterns... CRA redwood Whether you want the striking two-tone effects of A Grade (shown here) or the uniform beauty of Clear All Heart, you're sure of complete satisfaction when you specify grade-marked, trade-marked CRA Redwood—graded, milled and seasoned to uniform standards of quality.

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RESIDENCE—SUNNYVALE, CALIFORNIA

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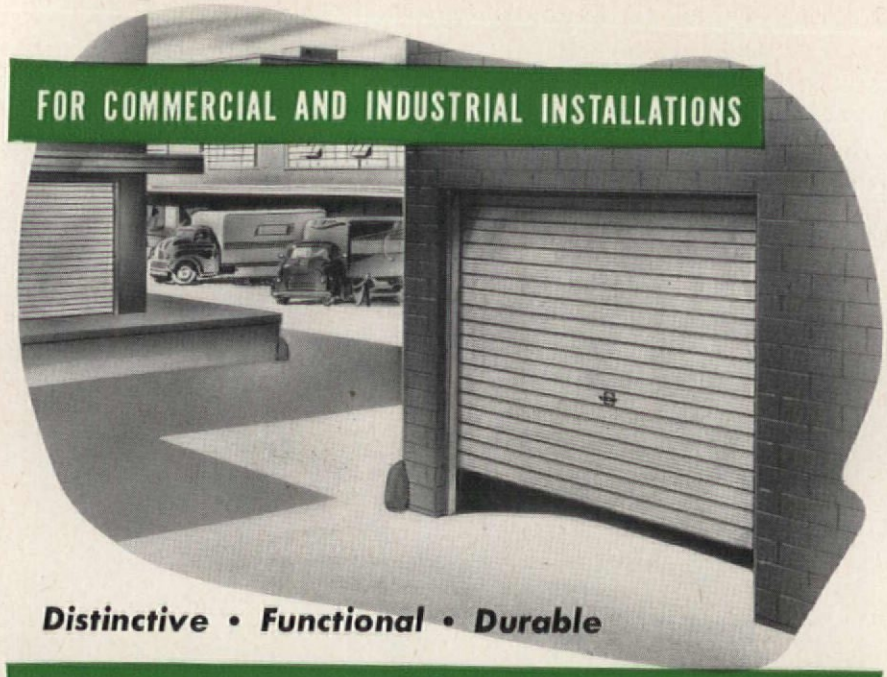
RNIA **REDWOOD** ASSOCIATION **CRA**



MORRISON

Roly-Door

STEEL SECTIONAL DOORS

Specify Roly-Doors for every type of commercial or industrial building you design.

Roly-Door's distinctively simple lines blend with any type of architecture. Their truly functional design — in 112 standard sizes — ensures safe, easy, trouble-free installation and operation. And, Roly-Door's all-steel construction provides a durability that defies weather and years of hard use.

Surprisingly enough — Roly-Doors cost no more than ordinary wood or metal doors for the same purpose.

Write today for the Roly-Door Technical Data File. Get all the facts about Roly-Doors . . . their effortless operation — their sectional design and construction — Morrison's nation-wide sales and installation organization — and the many other features that permit you to fit Roly-Doors into any of your plans.

Do yourself and your clients a real service. Specify Roly-Doors for *every* type of commercial or industrial building you design.

Roly-Doors come in a complete range of sizes for every residential, commercial and industrial application.

MORRISON ROLY-DOOR

Roly-Door Division, MORRISON STEEL PRODUCTS, INC.
651 Amherst Street • Buffalo 7, New York

Please send me your complete Technical Data File with all the facts about Roly-Doors.

Name ..... Title .....

Firm Name .....

Street .....

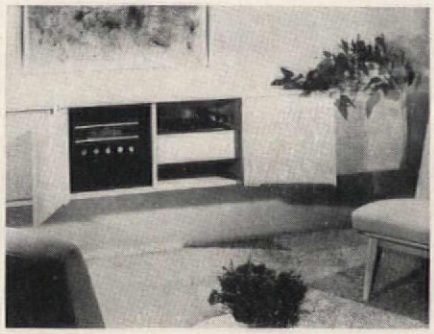
City ..... Zone ..... State .....

In Canada, Roly-Door Distributors, Ltd., 1330 Bloor, W., Toronto 4.

Also manufacturers of MOR-SUN WARM AIR FURNACES and CARRY-ALL TRUCK BODIES

AEH PRODUCTS

(*Continued from page 251*)



New stock cabinet for Hi-Fi

tion. *Knoll Associates, Inc., 575 Madison Ave., New York, N. Y.* (Also available through Knoll's Detroit showroom.)

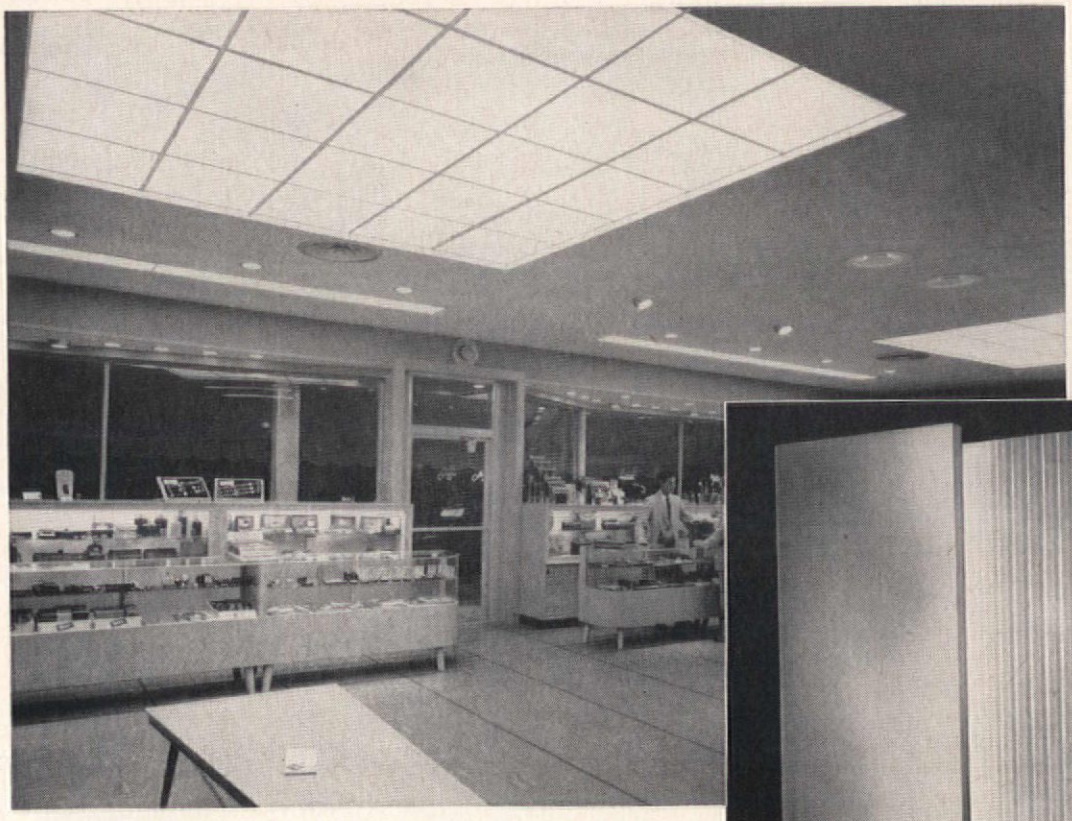
BURNER CONTROL

A new *Fireye Programming Control* for commercial-industrial gas, oil, or combination gas oil burners is said to be the first to provide complete protection against costly flame failure explosions, together with programming to meet any application requirement. Employing a flame-sensitive "Firetron" Cell, it shuts off fuel in 2 to 4 seconds after a burner flame goes out, helping to eliminate explosion hazards. The control offers simplified specification, installation and maintenance by providing a single standard "package" unit with complete automatic startup, operating, and shutdown control for any type of burner, and a selection of programming times for three types of ignition operation which complies with Factory Mutual Laboratories requirements. Its circuit prevents operation under any unsafe condition, and a plug-in chassis provides maximum accessibility and ease of installation. The control is described as rugged in design, and is built to withstand vibration and give continuous performance under the most adverse industrial conditions. *Combustion Control Corp., Dept. N, 718 Beacon St., Boston 15, Mass.*

NEW ROOM DIVIDERS

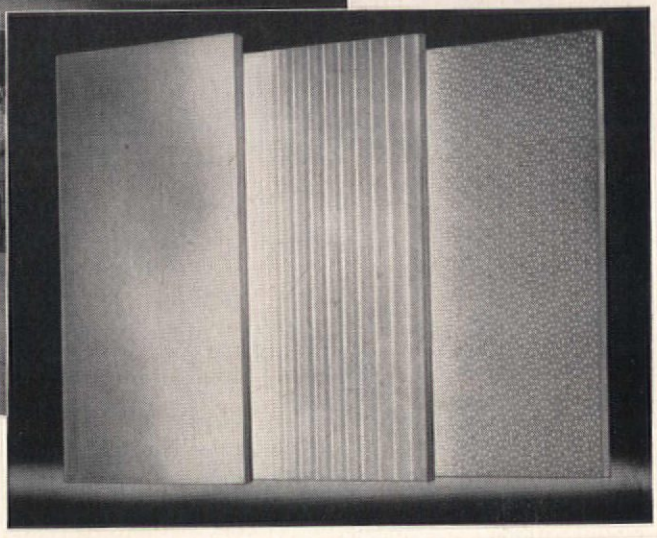
A new idea in room dividers, composed of three parallel vertical louvers held in place by separate tubular rods which extend from ceiling to floor, *Divyd-Ette* panels may be turned to any angle desired or closed to form a continuous panel divider. It is equally adaptable for dining room area, dining "L", foyer, or recreation rooms. Three models have

(*Continued on page 258*)



Carey's Luggage Store, Elmira, N. Y. Alba-Lite panels assure evenly diffused, shadow-free and glare-free illumination throughout. PYREX brand Lenslites focus light on merchandise to enhance buyer interest.

Alba-Lite is available in 3 flat patterns (as shown) in sizes up to 24" x 100", in standard bent shapes or bent to order. Ask for Bulletin LS-43.



How lighting helps lure travelers to this luggage store

Every retailer has the problem of attracting more customers in order to sell more merchandise.

Here's an example of how Corning engineered lighting helped solve that problem for Carey's Luggage Store, Elmira, N. Y.

Carey's needed lighting that would be decorative as well as efficient. That's why Alba-Lite was selected. And you can see how well Alba-Lite fills the assignment.

Smithcraft Area Illumination, utilizing large panels of Alba-Lite, provides 100 f.c. of evenly diffused, glare-free and shadow-free light. Merchandise is presented to customers in its rich, sales appealing best. That's because Alba-Lite transmits the true color of the light source. Fixture efficiency is high—yet panel brightness is low.

And the lighting and decorative advantages Carey's is enjoying today will never diminish. Alba-Lite won't fade or discolor or warp with age or atmosphere. Its smooth surface is easy to clean. It keeps its new look.

Use Lenslites for Emphasis

PYREX brand Lenslites with 150-watt lamps and mounted in Litecraft fixtures focus attention on gift and decorative items. The illumination level on counters beneath the downlights is 200 f.c. and on the display shelves it is 100 f.c. Two center Rambush ceiling downlights draw buyers to items in the showcase below . . . boost profitable impulse sales.

You can achieve equally effective results with Corning engineered lighting for schools, hospitals, offices . . . in just about every lighting project that comes your way. For additional information, write for the new Architects and Engineers Handbook. It's filled with helpful and useful information. Send the coupon today.

CORNING GLASS WORKS
CORNING, NEW YORK

Corning means research in Glass

CORNING GLASS WORKS, Dept. AR-3, Corning, N. Y.

Please send me a copy of the new Architects and Engineers Handbook LS-43.

Name.....Title.....

Firm.....

Address.....

City.....Zone.....State.....

Coursed Ashler variation with 4" & 8" units

Horizontally stacked 8" x 16" units

4" x 16" and 8" x 16" courses

Basket-weave using 8" x 16" units

Theme and Variations

Tooled horizontal joints; verticals wiped out

THE FAMILIAR THEME—8" x 16" FACE UNITS IN RUNNING BOND

Here 8" x 8" units are stacked

A very effective patterned Ashler

with exposed WAYLITE Partitions and Bearing Walls

The vast musical literature of the world is limited to a maximum of 13 tones in any one octave . . . similarly there is a very wide range of harmonious effects to be obtained with Waylite Masonry walls of any thickness . . . a few of the different handlings are shown here . . . they are achieved very simply. . . . Waylite masonry has adequate structural strength—superior thermal insulative qualities—and exposed Waylite interior walls need no acoustical treatment. Waylite Co., 105 W. Madison Street, Chicago, or Box 30, Bethlehem, Pa.

WAYLITE
MASONRY UNITS

You might have written

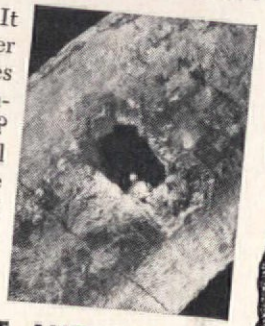
THIS ADVERTISEMENT

We know that every architect is completely familiar with the superiority of **cast iron soil pipe.** We know, too, that it takes plenty of proof of this superiority to convince your clients.

Reproduced here is one of the Institute's 1954 series of advertisements appearing in national consumer magazines. Through this campaign, the Institute is backing up those architects who are doing such constructive work in the interest of better sanitation.

ROOTS AREN'T YOUR ONLY SEWER PROBLEM!

An elephant down the drain? Ask any mother. It CAN happen. And if it does, and your house sewer clogs, what then? The whole sanitary service goes out of business. If your plumber has to use a cleaning rod, will the pipe material stand the rodding? Look at the picture in the center. That's an actual photograph of the hole found in non-metallic sewer pipe that failed. Fortunately there is ONE material that resists roots *AND* withstands rodding in the pipe fittings and in the durable, lead-caulked joints. That's why we say, *always*



USE PERMANENT CAST IRON SOIL PIPE AND FITTINGS

The Mark of Quality and Permanence

CAST IRON SOIL PIPE INSTITUTE

1627 K Street, N.W., Washington 6, D. C. Dept.BHG-2

Please send me: ☐ Folder about Plumbing Drainage.
☐ Our Woman's Club is interested in seeing your movie "Permanent Investment."

Name_____

No. & Street_____

City_____ Zone____ State_____

USE PERMANENT CAST IRON SOIL PIPE AND FITTINGS

HOW ARCHITECTS CAN MAKE VALUABLE USE OF THE INSTITUTE'S HELP

The Institute's motion picture film, "Permanent Investment," helps to alert prospective home owners to the importance of the best possible materials for the plumbing drainage system. Prints of this film may be obtained without cost for showing before interested groups. For full information and for literature on plumbing drainage, written for the consumer, use the convenient coupon.

CAST IRON SOIL PIPE INSTITUTE

Dept. AR-3, 1627 K Street, N. W.
Washington 6, D. C.

☐ Send educational folder, "Plumbing Drainage."

☐ Our local_____ Club wants to see your movie, "Permanent Investment." Tell us how to arrange for free showing.

Name_____

Address_____

City_____ Zone____

State_____

Are Your Air Conditioning Costs TOO HIGH?

This 100-ton capacity Ready-Power installation air conditions the International Harvester Parts Depot, Dallas.

If your present air conditioning costs are putting a squeeze on your profits, Ready-Power natural gas air conditioning offers you an ideal solution.

Ready-Power units operate at a fraction of electric power costs, in fact, at the LOWEST COST KNOWN. Automatic controls vary the capacity according to load requirements, thus assuring precision control of both temperature and humidity in all kinds of weather, and maximum operating economy at all times.

Install Ready-Power natural gas air conditioning, and take advantage of the savings it provides. Write today for complete information.

Ideal for Stores

. . . Theatres

. . . Sales Rooms

. . . and Super Markets

READY-POWER

SAVES AS IT SERVES

THE READY-POWER CO. • 11231 Freud Ave., Detroit 14, Mich.

Manufacturers of Gas and Diesel Engine Driven Generators and Air Conditioning Units; Gas and Diesel Electric Power Units for Industrial Trucks.

AEI PRODUCTS

(*Continued from page 254*)

been designed for individual decorating schemes. One model is made of strong translucent "Fiberglas," which can be wiped off easily with a damp cloth and requires no special cleaning or upkeep. It is available in yellow, gray, beige and white. To compliment birch doors the designers have provided a model of lacquered birch louvers. The third model is made of unfinished fir louvers, and may be painted, papered or covered with fabrics to match or harmonize with draperies and furniture.

All models reportedly can be easily installed. They come packaged in one and three ft sections for rooms 8 and 8½-ft high, but may be easily fitted for rooms of any height. Custom sizes are available on request. *Sandor Products Inc., Detroit, Mich.*

LIQUID PROCESS COLOR DUPLICATOR

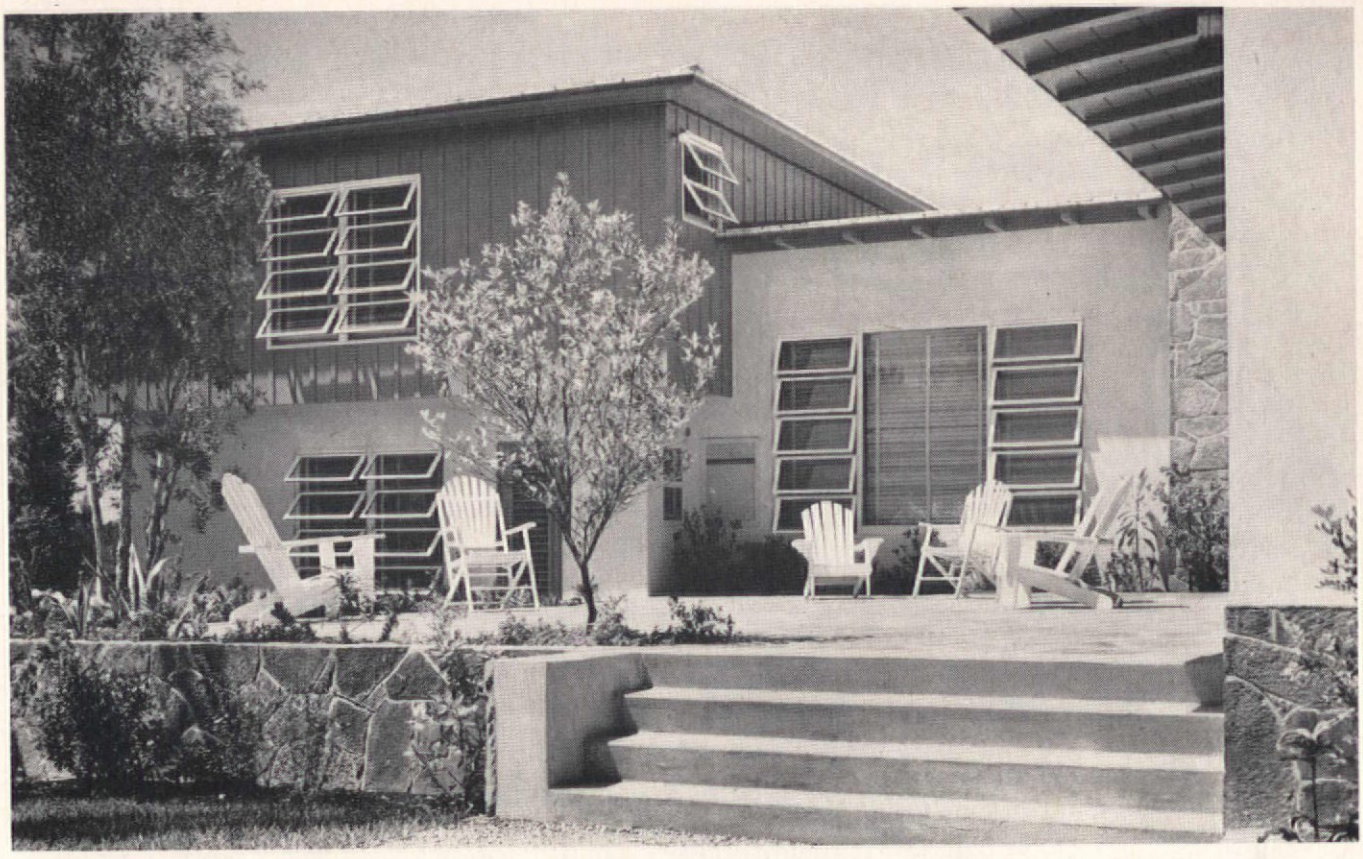
A new *Duplicopy* liquid process duplicator features "Magic Fluid Flow" said to feed the precise amount of fluid for best operation. A patented wiper blade reportedly assures even distribution of the fluid over the roller, makes possible sharp, clean, dry copies, and eliminates flooding, offsetting, and consequent loss of time and paper. The new machine is described as extremely simplified in operation. There are no stencils to cut and the master can be prepared as easily as typing. Anything hand-written, typed or drawn can be reproduced at speeds up to 150 copies per minute and in as many as five colors at one time. Hairline register on color reportedly can be obtained. The machine prints a minimum of 300 copies from one master, and master copies can be saved for re-use. Capacity for the machine ranges from postcard size up to 8½ by 14 in.

Two models of the machine are available. The Model A-44 has automatic feed, and the model H-44 is a manual feed unit. Both feature streamlined design and are finished in sapphire gray and satin aluminum. *Duplicopy Co., 224 W. Illinois St., Chicago, Ill.*

NEW STEAM GENERATOR

A new *Vapor-Clarkson* steam generator *Model OKJ-4740* can change from fuel oil to natural gas fuel by a flip of a switch, and without interrupting steam

(*Continued on page 262*)



Split Level Compatibility

Split level construction, with its many opportunities for innovation, presents a unique challenge to the creative architect. A major problem is to achieve overall harmony with a combination of two, or perhaps three levels with many natural contrasts of shrubbery and landscaping.

Nowhere is the **versatility** of Gate City Wood Awning Windows better demonstrated than in multiple level construction. The refined beauty of the wood awning sash really **belongs** . . . whatever the setting. Their trim horizontal lines present unlimited opportunity for design and color harmony.

Complete information will be promptly furnished upon request.

See our Catalogue in Sweet's.

®Gate City AWNING WINDOWS

Perma-treated for Long Life

"You can Specify Gate City with Confidence"

GATE CITY SASH & DOOR CO., DEPT. AR-2

P.O. Box 901, Fort Lauderdale, Fla.

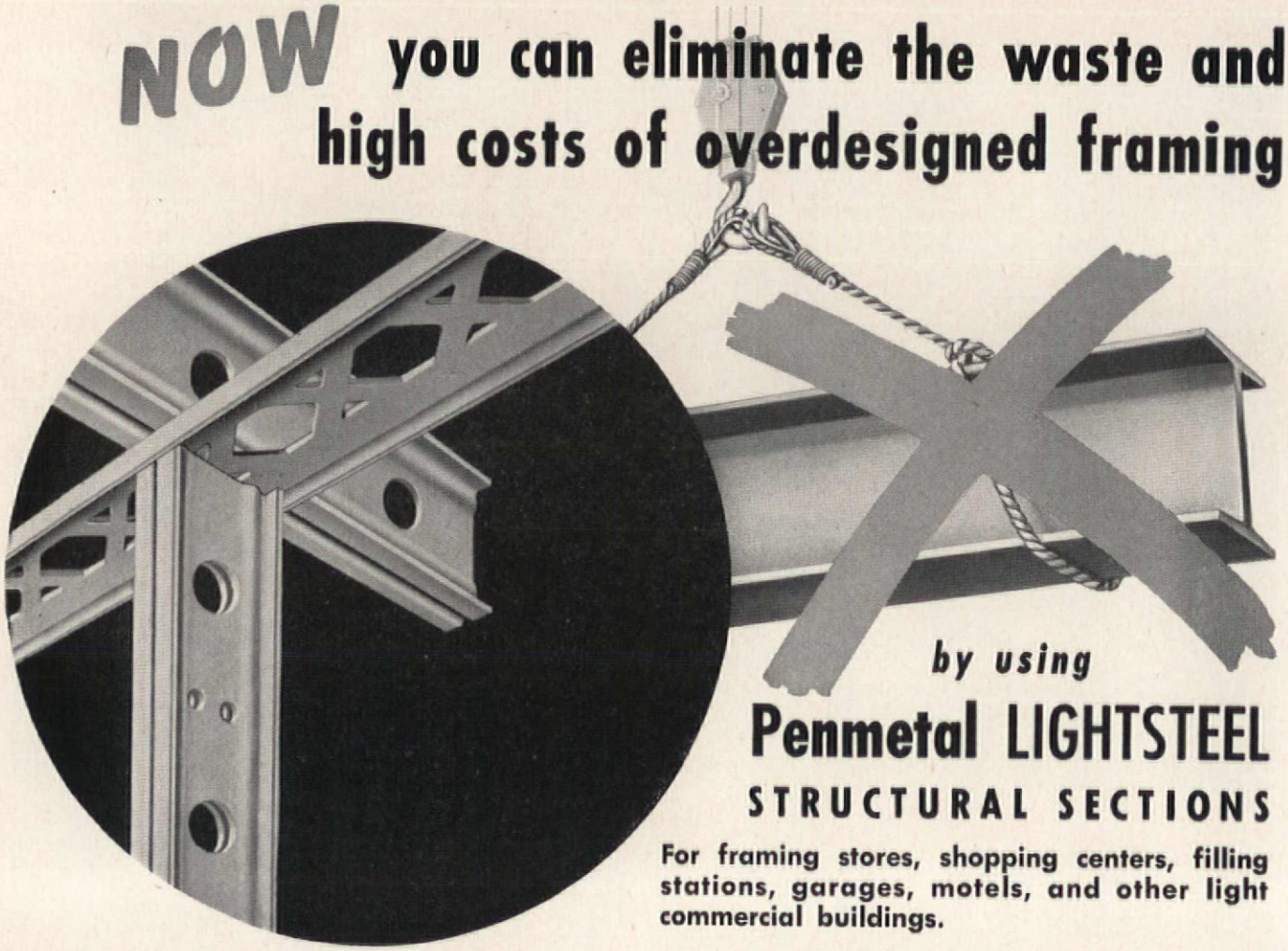
Gentlemen: Please send complete information on Gate City Wood Awning Windows.

Name _____

Address _____

City _____ **Zone** ____ **State** _____

NOW you can eliminate the waste and high costs of overdesigned framing



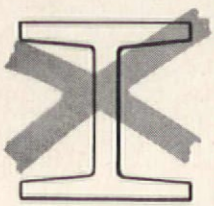
by using

Penmetal LIGHTSTEEL STRUCTURAL SECTIONS

For framing stores, shopping centers, filling stations, garages, motels, and other light commercial buildings.

ELIMINATE

expensive overdesigned sections



Fabricated from structural-grade, strip steel by cold forming, Penmetal LIGHTSTEEL structural sections are designed specifically for strength, light weight and low cost. No longer do you have to pay for extra load-carrying capacity which you do not need. And yet, Penmetal LIGHTSTEEL sections carry all the benefits of conventional steel framing.

ELIMINATE

expensive shop and site fabrication

The unique LIGHTSTEEL design, incorporating as basic elements both track and bridging, provides a built-in fabrication feature that eliminates expensive fabrication. Track sections are sized to fit over, and bridging sections inside of, the flanges of joists, studs and channels. When assembled, it is easy to weld, bolt or rivet them together for permanent strength. Shop assembly of wall panels saves time and money in field erection.

ELIMINATE

expensive erection equipment

Because they are light in weight and designed to fit together, Penmetal LIGHTSTEEL structural sections are extremely easy to handle and erect. Expensive cumbersome erection equipment is eliminated and dead weight loads are reduced. Additional savings are effected by the precisely engineered openings in the sections which simplify through-frame installation of wiring and plumbing.

Send for new 12-page catalog which gives complete specifications, engineering data and safe loads for all stud and joist sections. Ask for a copy of catalog SS-3.

PENN METAL COMPANY, INC.

General Sales Office: 205 East 42nd Street, New York 17, N. Y.
Plant: Parkersburg, W. Va.

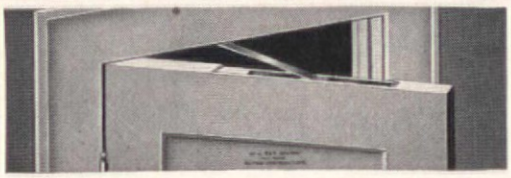
METAL MARK Penmetal 1869 OF QUALITY

PM-30

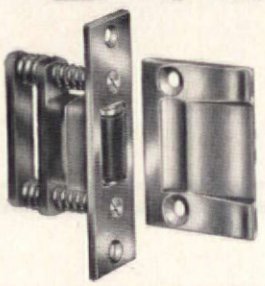
"... the patient must have absolute quiet."

GLYNN-JOHNSON

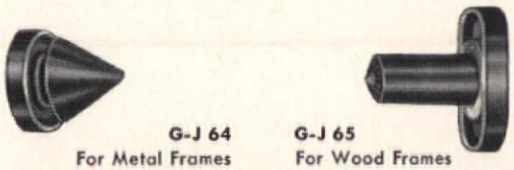
devices for HOSPITAL ROOM DOORS



G-J 320
Concealed Door Holder—Friction Control
. . . keeps the door stationary, always under control. Prevents idle swinging and slamming. Gentle hand pressure moves the door to desired positions.



G-J 30
Roller Latch
. . . eliminates the annoying click of latch bolts. As the door is closed, the rubber roller contacts the strike and becomes engaged in the strike plate depression—with complete silence.



G-J 64 For Metal Frames
G-J 65 For Wood Frames
Pneumatic Rubber Door Silencers
. . . form pneumatic air pockets when compressed by closed door. This provides exceptional cushioning power to prevent both door noise and latch rattle.

G-J KH-1
Hospital Door Arm Pull
. . . helps nurses and attendants avoid waste motion and unnecessary noise by permitting them to open and close doors with their arms, when their hands are occupied with trays or other articles.

These and many other G-J door devices are today being used on every type of door in thousands of hospitals and institutions throughout the nation, where, in addition to providing complete, efficient, and economical service, they are answering the need for silent performance of duty, expressed by the doctor's caution, "*Above all, the patient must have absolute quiet.*"

4544

MERIT CHARACTER CORPORATION DISTINCTION

Glynn-Johnson Corporation

Builders' Hardware Specialties for over 30 Years

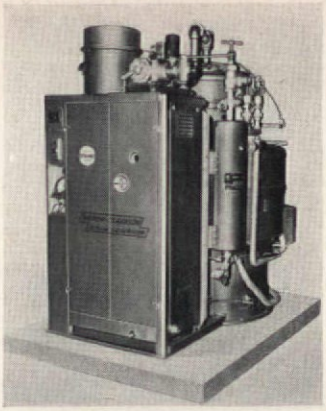
4422 N. Ravenswood Ave. Chicago 40, Illinois

Refer to G-J Catalog for complete line of door holders, bumpers, and specialties . . . for all types of doors in public and commercial buildings.

(*Continued from page 258*)

output. The Vapor engineers have incorporated the fuel-oil spray nozzle into the metal body of the gas burner. By flipping the fuel selection switch from natural gas to oil, the motorized gas valve closes and the fuel oil solenoid valve opens, releasing oil under pressure to the spray nozzle. A constant spark and pilot light insure positive lighting.

This new Vapor-Clarkson steam generator Model OKJ-4740 develops steam pressure up to 300 lb. pressure in less than three min from cold water, and makes 1500 to 5000 lb. of steam per hour. The manufacturers claim that it is over 80 per cent efficient.



Generator runs on gas or oil

Once started, by turning one switch, automatic controls take over, causing the steam generator to turn on and off and modulate steam output to meet a changing steam demand. The steam pressures may be changed from 10 to 300 lb pressure by turning one control. A patented steam separator removes excessive moisture and water treatment particulars from the steam so that 99 per cent dry, clean steam is directed through the stop valve to the steam line.

The steam output is modulated by a servo-control which meters the fuel, combustion air and feed water, in proper amounts. To efficiently produce the amount of steam needed by the factory at a particular time, steam output is automatically increased or decreased.

The manufacturer reports several safety controls: the steam temperature limit control; low water shut off; two safety valves; overload relays and electric eye built into the machines.

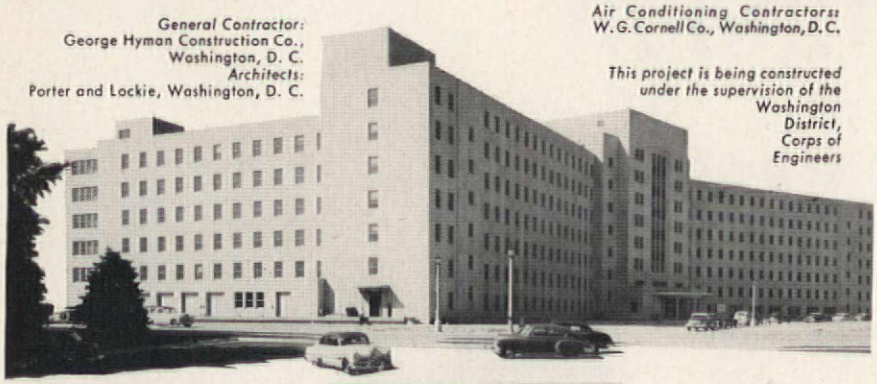
This Vapor-Clarkson steam generator is a complete package which includes the 7¼ hp electric motor, blower, feed water pump, steam separator, steel coils, and all controls, in one cabinet. No special building or walled-in area is necessary as these units, which may be used as one unit or in banks of several units, and can be operated by a master control that automatically turns on the number of units necessary to make the amount of steam needed.

The Vapor-Clarkson is 50 in. wide, 80 in. high and 73 in. long. *Vapor Heating Corp., Dept PR, 80 E. Jackson, Chicago, Ill.*

FIRE RETARDANT PAINT

Cited as a new development in paint manufacture is a fire retardent compound containing carbon dioxide and calcium chloride, which is claimed to smother fire and retard the spread of flame right on the surface. *Fyr-Kote* reportedly can be applied as easily and economically as ordinary interior paint, over any interior surface — including the most combustible. It is available in a variety of decorative colors and has been listed by Underwriters Laboratories. *Fyr-Kote Co., A Div. of Morris Paint & Varnish Co., 27th & Douglas St., Omaha, Neb.*

(*Continued on page 266*)



General Contractor:
George Hyman Construction Co.,
Washington, D. C.
Architects:
Porter and Lockie, Washington, D. C.

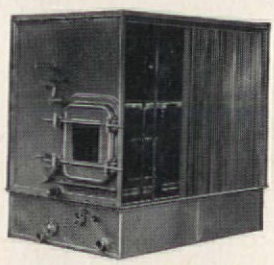
Air Conditioning Contractors:
W. G. Cornell Co., Washington, D. C.

This project is being constructed under the supervision of the Washington District, Corps of Engineers

Marlo

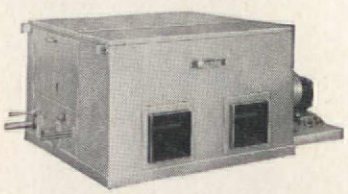
EQUIPMENT

provides year-round air conditioned comfort in U. S. Soldier's Home Auditorium



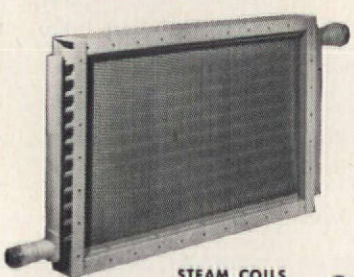
SPRAY TYPE DEHUMIDIFIER

Every facility for comfort and efficiency has been incorporated in the new Domiciliary Building of the U. S. Soldier's Home in Washington, D. C. . . . including complete year-round air conditioning in the auditorium.



CEILING TYPE
AIR CONDITIONING UNIT

Modern Marlo equipment, which serves so many buildings in the Washington area, was installed for this important comfort-conditioning job. Marlo air conditioning units, spray type dehumidifier, steam coils and pan humidifiers provide a pleasant living atmosphere for residents of this handsome structure.



STEAM COILS

Marlo equipment is designed to serve any air conditioning need . . . better!

See our Bulletin in Sweet's Catalog

Marlo COIL COMPANY

Manufacturers of COOLING TOWERS • EVAPORATIVE CONDENSERS • INDUSTRIAL COOLERS • AIR CONDITIONING UNITS • MULTI-ZONE UNITS • BLAST HEATING & COOLING COILS

Saint Louis 10, Missouri

SEE RUST-OLEUM APPLIED DIRECTLY OVER SOUND RUSTED SURFACES! MAKE THIS TEST UNDER YOUR OWN CONDITIONS AND SEE PROOF OF PERFORMANCE!

See Rust-Oleum 769 Damp-Proof Red Primer actually applied over a badly rusted surface after simple scraping and wire-brushing to remove rust scale and loose rust in the Rust-Oleum *"rusted panel demonstration."* Rust-Oleum's specially-processed fish oil vehicle *penetrates* rust to bare metal usually eliminating sandblasting and other costly surface preparations.

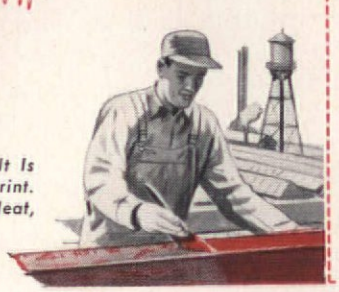
Rust-Oleum finish coatings in Aluminum, Green, White, Gray, Yellow, Black, Orange, Blue and others provide both *Rust Prevention* and *Decorative Beauty!* Specify Rust-Oleum for new construction, maintenance, and re-modeling. See Sweets for complete catalog and nearest Rust-Oleum Industrial Distributor, or attach coupon to your business letterhead.

See local classified telephone directory under Rust Preventives or Paints for nearest Rust-Oleum Industrial Distributor.

RUST-OLEUM®

STOPS RUST!

There Is Only One Rust-Oleum. It Is Distinctive as Your Own Fingerprint. Resists Rain, Sun, Fumes, Snow, Heat, Salt Air, Salt Water, etc.



ATTACH TO YOUR LETTERHEAD — MAIL TO
THE RUST-OLEUM CORPORATION
2503 OAKTON ST., EVANSTON, ILLINOIS

I want to know more about RUST-OLEUM. Send me without obligation a FREE sample. I intend to test it ☐ indoors; ☐ outdoors; on ☐ wood; ☐ rusted metal; ☐ clean metal; ☐ brick; ☐ concrete; ☐ stucco;

(State on the above line object or structure such as tractor, tank, fence, metal sash, roof, floors, walls, etc.)

Subject to special conditions: ☐ weather; ☐ humidity; ☐ fumes; ☐ brine; ☐ dampness.

☐ I have a chain-link fence. Please send full information on RUST-OLEUM's new Roller Method that cuts re-coating costs.

☐ Send Complete Catalog with Color Guide

Please be sure to Indicate Color Preference Here

☐ Have Qualified Representative Call _____

NOTE: We want to supply you with the correct sample for your test. Please be sure to check off all appropriate information about your problem.

Paneled Doors... Mark of the Better Home

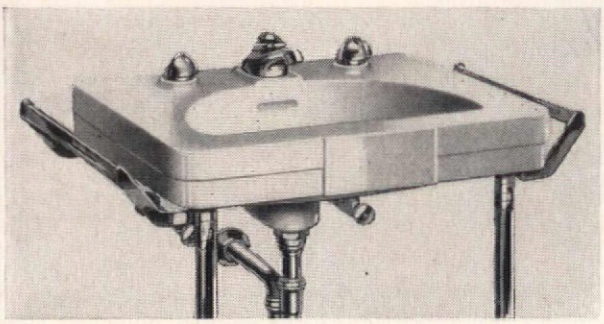
Fads and fancies in home decorations come and go—but the charm of a paneled door is ageless. That's why paneled doors are so often the choice for the better home ...the home that expresses stability; enduring beauty and comfort. Today, Ponderosa Pine paneled doors enable you to offer homeowners a wide choice of styles—thus creating sales-stimulating individuality in the homes you build.

Ponderosa Pine **WOODWORK**

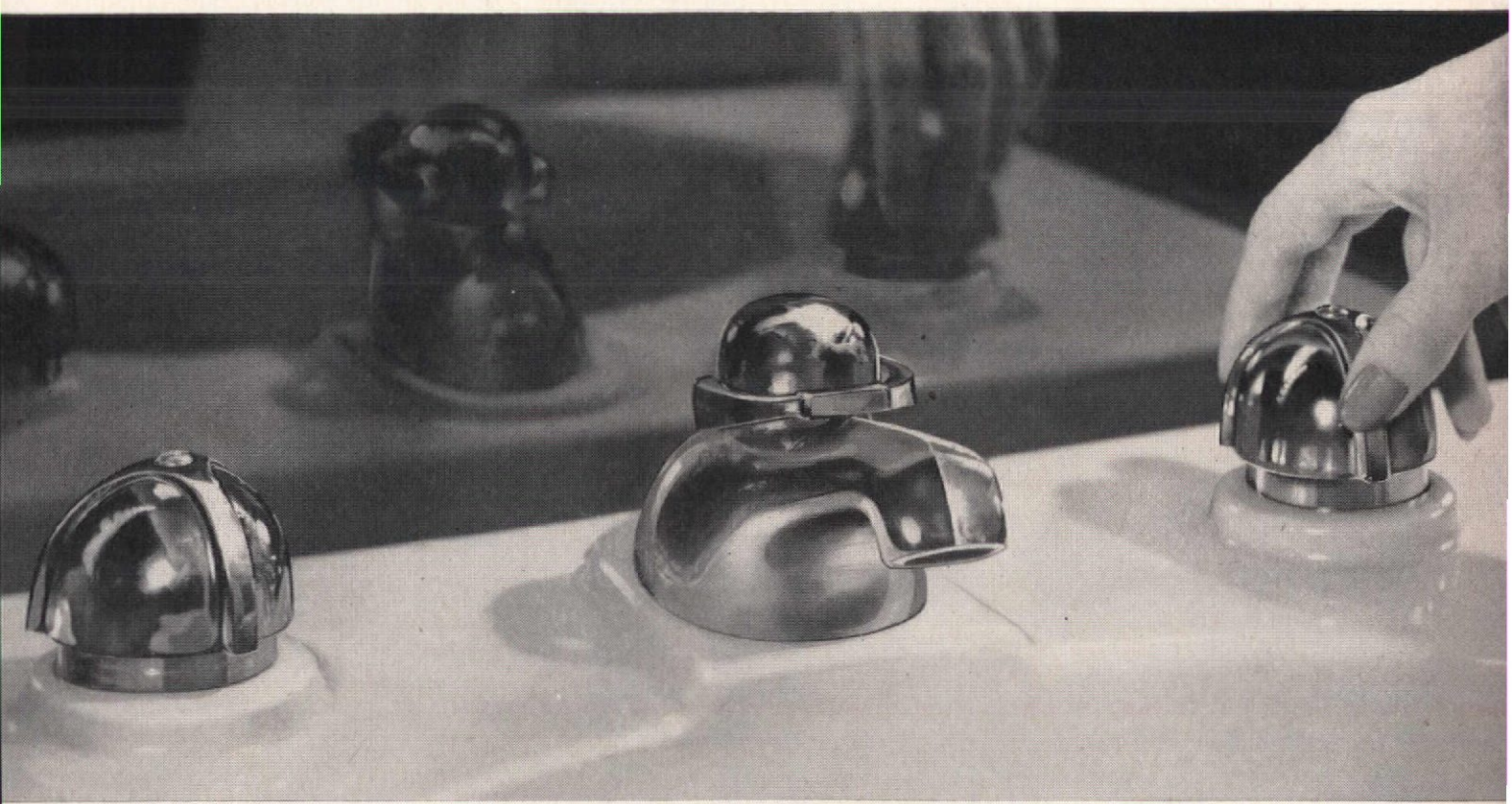
WHY YOU SHOULD SPECIFY

CRANE

In Crane bathroom and kitchen fixtures, you have design that is as fresh as today's architectural thinking... styles and sizes as varied as the needs of your clients... a line so complete you never need look beyond the pages of the Crane Architect's Catalog. And in the minds of your clients, as you probably know, no other name in plumbing so strongly signifies quality.



The Crane Diana lavatory is of lustrous vitreous china with semi-oval basin and paneled front. Supported by chrome-plated metal legs. Available with or without chrome-plated towel bars. Three sizes: 24 x 20", 27 x 21" and 33 x 22".



Crane matched and colored fixtures

When you plan a bathroom around Crane fixtures, you find it easy to achieve harmony of both design and color.

That's because the Crane line is so extensive that, regardless of the size or type of bathroom, there are Crane fixtures to fit it exactly—in size, shape, design. And in color, too.

With a choice of white or eight beautiful decorator colors available, Crane offers the widest selection of colors on the market.

CRANE CO.

GENERAL OFFICES: 836 SOUTH MICHIGAN AVE., CHICAGO 5

VALVES... FITTINGS... PIPE... PLUMBING AND HEATING

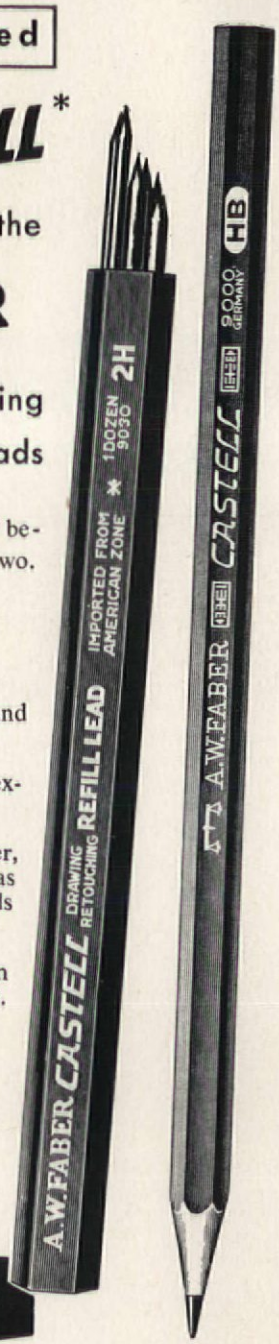
(*Continued from page 262*)

TRANSLUCENT PLASTIC STRUCTURAL SHEETS

A new translucent structural sheet of Fiberglass-reinforced polyester resins is being molded by Resolite Corporation. The new sheet is called *V-beam* and nests with the corrugation of available protected metal roofing and siding sheets. Designed for wider purlin and girt span, the greater corrugation depth provides increased rainfall runoff capacity for roofs of low pitch. Sheet specifications are: lengths up to 12 ft; overall width 29 in.; coverage width 26½ in.; corrugation pitch 5.3 in., depth 1¾ in. While the sheet will be made in any of 10 standard colors on special order, normal production will include pale green, ice blue and semi-clear, for the purpose of providing effective skylights and sidewall glazing for industrial buildings. Such plant daylighting is said to be economical since it eliminates flashing, caulking and special framing. The material is reportedly shatterproof and unaffected by weather extremes of heat, cold and moisture, and by normal industrial fumes. This helps to curtail maintenance costs. *Resolite Corp., Zelienople, Pa.*

imported

CASTELL* —the TOPPER in drawing pencils and leads



CASTELL enjoys the reputation of "world's best" because it excels on *every* count . . . not just one or two.

CASTELL excels in—

SMOOTHNESS—it is free of hard spots.

GRAPHITE-SATURATION—insures maximum opacity and gives perfect adhesion to the paper.

STRENGTH—points will not break even under extraordinary drawing pressure.

NON-BLEEDING—producing *more* copies, sharper, cleaner copies per drawing, even after it has gone through the blueprint machine hundreds of times.

ECONOMY—lasts 25% to 33% longer, more than offsetting the few pennies differential in cost.

Give your creative brain the benefit of CASTELL, *World's Standard among drawing pencils and leads.*

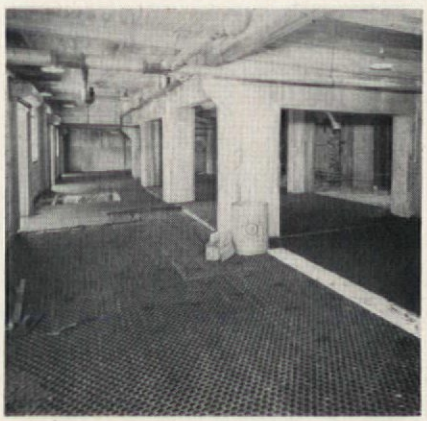
the drawing pencil with the Master Degrees

A.W. FABER-CASTELL PENCIL COMPANY INC., NEWARK 3, N.J.

*Imported from West Germany

STEEL-REINFORCED FLOORING

A new "packaged unit" heavy duty flooring is available from United Laboratories. Called *Steel-Rock*, the new flooring reportedly combines for the first time a heavy steel mesh and special filler as a complete unit for surfacing floors subjected to extra-tough abuse. Claimed to meet rugged requirements of modern industrial production and materials handling problems, the flooring is purposely engineered to combat floor destruction caused by tons of heavy rolling traffic. Prime advantages claimed are its ability to withstand impact as well as heavy loads, and to remain maintenance-free for years to come. The resilient filler used in the grid compacts to meet the level of the steel ribs, thereby permitting wheels to ride on the steel without the noise and slipperiness of a solid steel surface. The product may be applied over new or old surfaces of wood or concrete, inside or outside, at a depth varying from ⅜ to 1 in., depending upon job requirements. *United Laboratories, Inc., 16801 Euclid Ave., Cleveland, Ohio.*

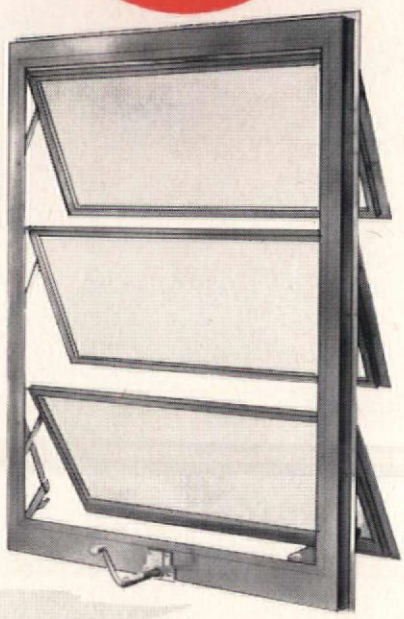


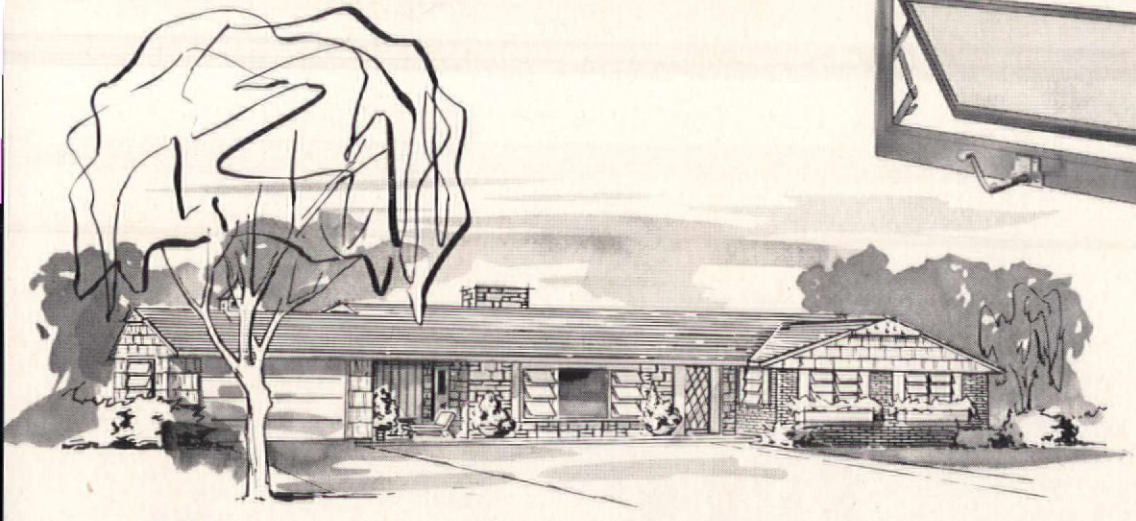
(*Continued on page 270*)

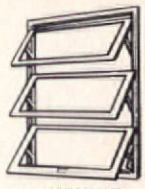
Made for each other . . .

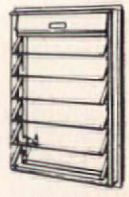
MODERN HOUSES AND UALCO ALUMINUM AWNING WINDOWS ➡

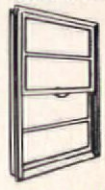
Ualco
U-AL-CO





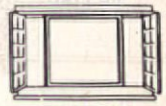

AWNING


JALOUSIE


DOUBLE HUNG

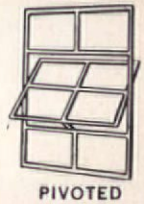
CASEMENT

HOPPER


TWINSUL

UTILITY

PROJECTED


PIVOTED

BASEMENT

These two go together in perfect architectural harmony, both making the most of the modern concept of simple, functional design.

These two go together in performance as well as appearance, too. Modern houses, built for maximum efficiency, can ask no greater window efficiency than the Ualco Aluminum Awning Window with its 100% or controlled ventilation and its strip-proof cam lock operator which eliminates separate locking devices; unlocks, opens and locks in any position to over 90 degrees—with one finger-tip operation.

No wonder many architects prefer Ualco Aluminum Awning Windows in the houses they design!

Ask About Ualco's Engineering Planning Service — specifically designed to assist architects, engineers and contractors in making "take-offs" and solving their window problems.

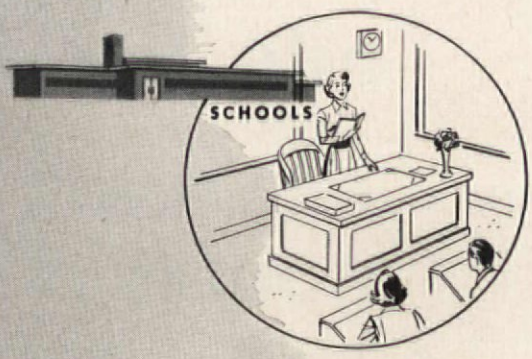
See UALCO'S Catalog in Sweet's $\frac{16a}{Un}$ or write for complete information.

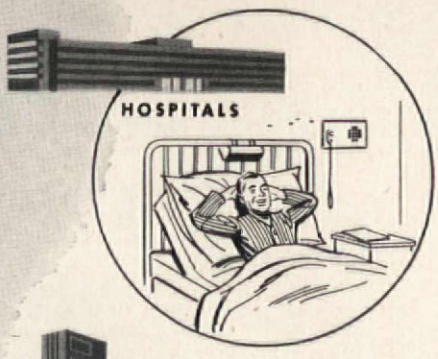
UNION ALUMINUM COMPANY, INC. • SOUTHERN SASH SALES & SUPPLY CO.
SHEFFIELD, ALABAMA

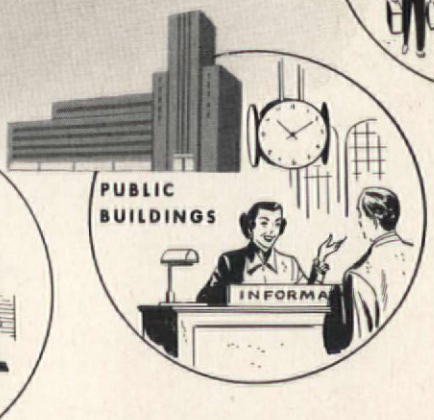
WORLD'S LARGEST MANUFACTURER OF ALUMINUM WINDOWS

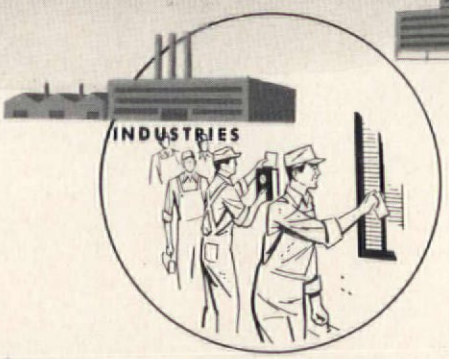
One source for all Time and Signal equipment

Stromberg Time









clock systems

program signals

audio-visual
paging systems
nurse call

doctors registers

fire alarm equipment

tower clocks

time recorders

STROMBERG TIME CORPORATION

Subsidiary of General Time Corporation

THOMASTON, CONNECTICUT

Here's the Interesting Story of
AMERICA'S MOST AMAZING ACOUSTICAL JOB

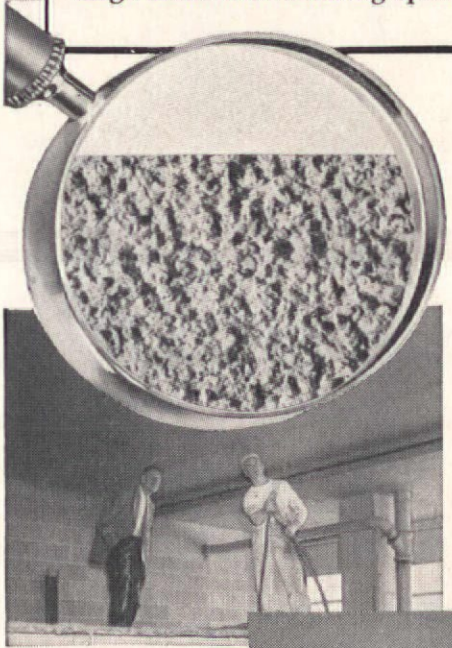
WORLD'S LARGEST Machine-Placed ACOUSTICAL INSTALLATION

U.S. Army Finance Center
Fort Benjamin Harrison
INDIANAPOLIS

Architects: Harley, Ellington and Day, Detroit, Mich.
General Contractors: Sherry-Richards Co., Chicago, Ill. Willcox Construction Co., Inc. Indianapolis Corbetta Construction Co., Chicago, Ill. James McHugh Construction Co., Chicago, Ill.
Plastering Contractors: McNulty Bros. Co., Chicago.

THEY CAME TO WATCH FROM ACROSS AMERICA!

Plastering contractors from all corners of the nation traveled to see this job because it is a revolutionary new technique of acoustically treating large areas with amazing speed. *And they were impressed!*



30 ACRES OF ACOUSTIC!

Unbelievable, but true!

2250 Square Yards of Finished Acoustical Per Day!

No wonder Zonolite Acoustical Plastic was specified in the Army Finance Center project! Ease of application, plus Zonolite's benefits of top sound absorption, beauty, and super fire protection make Zonolite the ideal acoustical material for government buildings, hospitals, hotels, office buildings, stores, homes, etc. Find out how you can make Zonolite Acoustical Plastic *work wonders for you* in maintaining the maximum degree of sound conditioning, beauty and fire protection—at low cost.

ATTRACTIVE FINISH— beautiful finish achieved without use of plaster tools. Magnified inset shows decorative texture produced; traps sound, gives noise reduction coefficient of 0.65.

NO FURRING! Photo shows application of Zonolite Acoustical Plastic. Adheres direct to exposed concrete.

Photo shows secret of this high speed acoustical treatment. Combination of Zonolite Acoustical Plastic and plaster placing equipment accomplished unprecedented record acoustical installation.

FREE BOOK Before starting *your* next job get the full story of the world's largest machine-placed acoustical job. Mail coupon for story, *"30 Acres of Acoustic!"* and free descriptive booklet giving complete information about time-saving, cost-cutting Zonolite Acoustical Plastic.

ZONOLITE BRAND VERMICULITE AGGREGATES

ZONOLITE COMPANY

135 S. LaSalle St., Dept. AR-34, Chicago 3, Illinois

Zonolite Company, 135 S. LaSalle St.
Dept. AR-34, Chicago 3, Illinois

Gentlemen: Please send story "30 Acres of Acoustic" and free descriptive booklet PA-5 on Zonolite Acoustical Plastic.

NAME.....
FIRM.....
ADDRESS.....
CITY.....ZONE.....STATE.....
☐ Architect ☐ Builder ☐ Other

HARDWOOD PRODUCTS DOORS
give you a choice of "time lasting" matched facings

No matter what wood specie you select, you'll welcome the near perfect Veneer grain matching that's yours on all Hardwood Products Doors — whether specified or not.

HARDWOOD PRODUCTS MASTER-FLUSH DOORS

. . . feature 1/8" thick Veneers available in Natural Birch, Natural Gum, Selected Red Gum, Plain Red Oak, Plain African Mahogany, Northern White Pine and Ponderosa Pine. MASTER-FLUSH doors are especially made to withstand the hardest usage and the abuse inherent in most types of institutional buildings.

HARDWOOD PRODUCTS STANDARD-FLUSH DOORS

. . . feature the same core construction as Master-Flush doors but are faced with thinner veneers. Face veneers include Natural Birch, selected White or Red Birch, Selected Red Gum, Plain Red Oak, Plain White Oak (rotary cut), Natural Hard Maple, Selected White Hard Maple and Northern White Pine — all 1/20" thick. Sliced Plain White Oak in 1/24" thickness. Highly figured cabinet veneers include Comb Grain White Oak, Plain Walnut, Quartered Walnut, African Ribbon Stripe Mahogany and Plain Philippine Mahogany — all 1/28" thick. Other veneers available on request.

For complete Hardwood Products Door veneer data consult Sweet's Architectural File 15c/HA.

Another HARDWOOD product — RIVERBANK sound insulating doors are fully described in this free brochure. Write Dept. AR.

NEW YORK
BOSTON • CHICAGO
CLEVELAND

HARDWOOD PRODUCTS CORPORATION DOORS

HARDWOOD PRODUCTS CORPORATION • NEENAH • WISCONSIN

A|H PRODUCTS

(*Continued from page 266*)

INTERLOCKING RUBBER TILE

Available in a wide variety of marbleized colors, *Rubberlock* is a new type of interlocking tile. Made in two section sizes, 8 by 8-in. and 24 by 24-in., in 1/4 and 1/2-in. thicknesses, the tiles can easily be placed in position on concrete or wood floors or below grade level without the use of cement or mastic. Rubberlock is also available in either smooth or corrugated surfaces in black. Cost estimates and color samples may be obtained from *R. L. Mitchell Rubber Co., Dept. AR, Attn. M. M. Levitt, 2114 San Fernando Rd., Los Angeles, Calif.*

New rubber tiles interlock

SIMULATED MARBLE

Recently developed, after years of experimentation with polyester resin, *Cali-marb* simulated marble may be used for many decorative applications. It is reported that the material will not break as easily as real marble, resists heat, stains, weather and rot, has a tensile strength greater than steel (on a weight per weight basis) and is easy to keep clean. Said to be particularly appropriate for renovating interior and exterior store fixtures, Cali-marb is also suitable for use in offices, restrooms, etc., and may be used to cover such surfaces as tables, counters and radiator enclosures. Application is a simple adhesive process which requires no special skill. The material is sold in sheet form, and may be cut and sold in various sizes. It is available in white, black, green and reddish brown, and is said to duplicate the delicate graining and smooth surface of real marble. *Caligari Products, Dept. B-3, 806–808 W. 21st St., Norfolk, Va.*

(*Continued on page 272*)

Specify

SALES-BUILDING LUXURY HARDWARE of ALCOA ALUMINUM at regular prices!

Made in designs to harmonize with traditional or modern architecture, builders' hardware made of Alcoa® Aluminum adds sales appeal to any home. Yet leading manufacturers offer these luxury lines of lock sets, escutcheons, hinges, window and cabinet hardware made of solid Alcoa Aluminum at regular hardware prices.

Alcoa helped these pace-setting manufacturers by developing alloys that were corrosion resistant all the way through, by developing beautiful finishes that won't chip or wear off, by developing fabricating methods that keep the price low. Ask your hardware consultant or builder about the quality lines of builders' hardware made of Alcoa Aluminum. ALUMINUM COMPANY OF AMERICA, 1971-C Alcoa Building, Pittsburgh 19, Pa.

ALCOA ON TV brings the world to your armchair with "SEE IT NOW" featuring Edward R. Murrow, Tuesday evenings on most CBS-TV stations.

ALCOA ALUMINUM

ALUMINUM COMPANY OF AMERICA

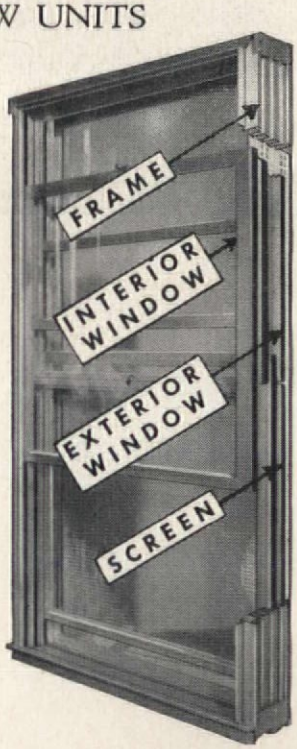
. . . with

Nurses' Home, Meadville, Pa.
Architects: Wilbur Watson Associates
Cleveland, Ohio

Fleetlite

YEAR-'ROUND ALUMINUM DOUBLE, DOUBLE-HUNG WINDOW UNITS

NO STORAGE PROBLEMS
FREE FROM DRAFT AND STORMS
EASY CLEANING FROM WITHIN



In Meadville, Pennsylvania, Spencer Hospital Nurses' Home installed *over 300* Fleetlite Aluminum Window units more than three years ago. Mr. Noel Poux, President of the Board of Trustees, says, "We . . . find the windows entirely satisfactory, both in appearance and operation and are specifying them in a new addition to the hospital which is now being planned." Other hospital administrators, inspecting the Fleetlite installations at Spencer Hospital, were "very" favorably impressed and expressed appreciation of the advantages" of Fleetlite Windows. Storm sash and screens are self-stored in each unit and are cleaned from inside. Double-window protection keeps out cold and exterior noise, lowers fuel costs by tight insulation. Sash can be adjusted for draft-free ventilation. Aluminum construction means no painting or puttying required.

For full information and detailed literature on how Fleetlite Windows can keep building expenses down, WRITE TODAY.

Fleetlite
AMERICA'S *Finest* WINDOW

Made by . . .

Territories open for representatives and dealers.

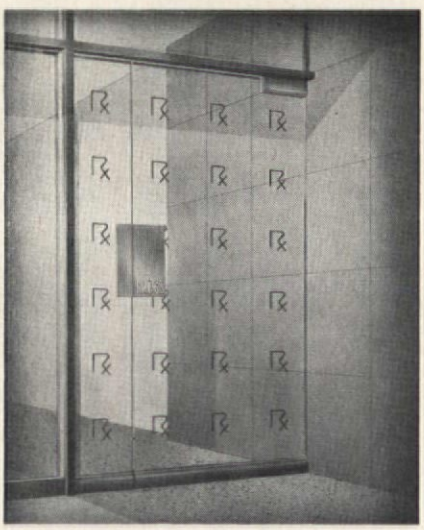
FLEET OF AMERICA, INC. 407 Dun Building, Buffalo 2, New York

A|E PRODUCTS

(*Continued from page 270*)

TEMPERED GLASS FOR DOORS

Pittsburgh Plate Glass Co. has recently developed a new *Herculite* tempered glass for use in all-glass doors and store front applications. Because decoration may be had in permanent, fired-on true ceramic colors, or in sandblasted patterns, an almost limitless range of design possibilities is reportedly offered. Functional improvements of the glass cited are: will not solarize (turn amber when exposed to sunlight); is glare-reducing; chances of accidents are minimized by the more apparent edges. Hardware is of a simple, modern shape. *Pittsburgh Plate Glass Co., 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.*



New glass uses custom designs

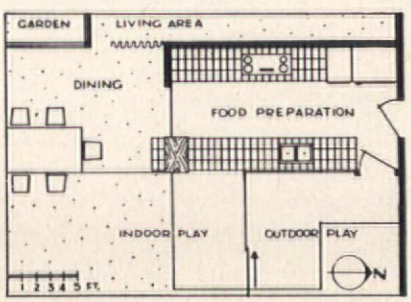
MODULAR FURNITURE

Otto Kolb has recently designed some extremely functional and versatile furniture for Dart Associates, built on a modular principle. Designed so that there is no separation between them, the units achieve a custom-made look, using sections with drawers of various sizes, open shelves, or storage areas with wood or slat doors. The furniture is available in birch, ebony, walnut and mahogany, and constructions are possible from 18 by 20 by 16 in. to any desirable size. The units are described as inexpensive. An attractive feature is that one can start out with a few basic pieces and add to them later, as space, needs and budget will allow. Dart Associates, Inc., 39 West 23rd St., New York 10, N. Y.

Design for kitchen-dining-play area by Richard Neutra, F. A. I. A.

"CLAY TILE CONTRIBUTED BEAUTY, UTILITY ...AND A TRUE TOUCH OF THE UNUSUAL!"

plan for kitchen and adjacent areas



This diagram shows you graphically how Richard Neutra floor-planned his ingenious design for comfortable living in his kitchen-dining-play area.

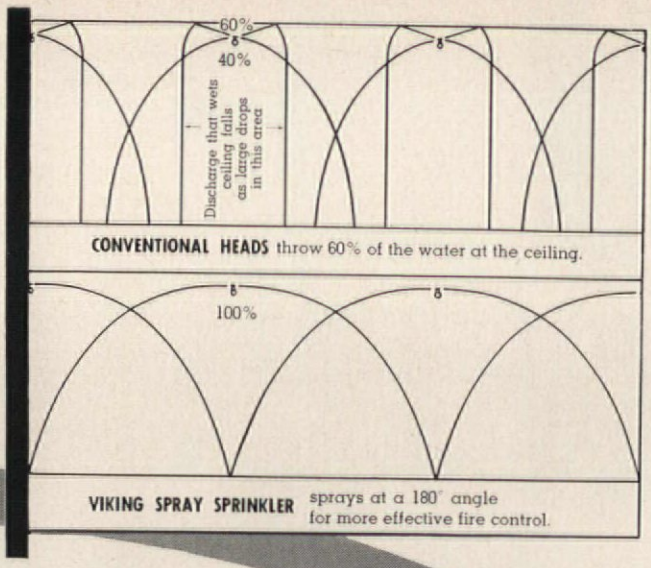
World famous architect Neutra used all of the virtues of clay tile in his design for a kitchen-dining-play area. The playroom and patio floors flow naturally from the ingenious "stepsaver" kitchen. Cheerful tile work surfaces invite food preparation. The rear wall wainscoting presents a glistening, easily-cleaned surface that cuts down on cleaning chores. Clay tile can add much to *your* next residential, industrial or institutional project: top color and design potential, durability, ease of maintenance and real long range economy. Be sure to check comparative costs before specifying a substitute material—your clients will appreciate clay tile!

Tile Council of America, Room 3401, 10 East 40th Street, New York 16, N. Y. or Room 433, 727 West Seventh Street, Los Angeles, Calif.

The Modern Style is

GENUINE CLAY tile

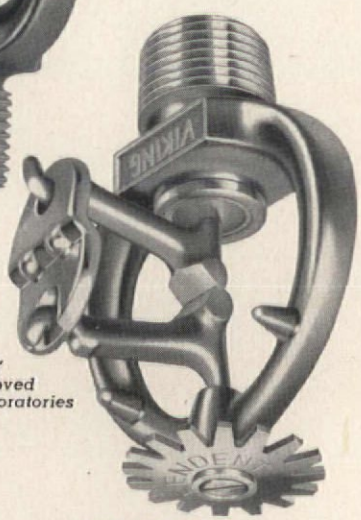
PARTICIPATING COMPANIES: American Encaustic Tiling Co. • Architectural Tiling Co., Inc. • Atlantic Tile Mfg. Co. B. Mifflin Hood Co. • Cambridge Tile Mfg. Co. • Carlyle Tile Co. • General Tile Corp. • Gladding, McBean & Co. • Mosaic Tile Company • Murray Tile Co., Inc. • National Tile & Mfg. Co. • Olean Tile Co. • Pacific Tile and Porcelain Co. • Pamona Tile Mfg. Co. • Robertson Mfg. Co. • Royal Tile Manufacturing Co. • Summitville Tiles, Inc. • United States Quarry Tile Co. Winburn Tile Mfg. Co.



progress in sprinkler protection!

Viking SPRAY SPRINKLER

UPRIGHT



PENDANT

Listed by Underwriters' Laboratories and approved by Factory Mutual Laboratories

When specifying sprinklers for that new building or the old one that is being renovated, insist on the new Viking Spray Sprinkler. Tests have found them almost a third more effective than conventional sprinklers . . . especially in high-piled storage areas, rubber tire warehouses, etc.

Viking Spray Sprinklers provide:

- *More efficient water distribution . . . less water is needed . . . at lower pressures.*
- *More uniform water coverage.*
- *Lower ceiling temperatures practically eliminate ceiling damage from fire . . . without directing spray at the ceiling.*
- *Completely adaptable to old or new sprinkler installations.*
- *The spray has greater cooling effect, so fewer sprinklers operate in case of fire.*

see our CATALOG in SWEET'S FILE ARCHITECTURAL

the Viking corporation

HASTINGS, MICHIGAN

Bethlehem Longspan Joists give maximum column-free space to this store interior at the Thruway Super Plaza, Inc., Cheektowaga, N. Y. *Architect:* Trevor Rogers, Buffalo. *General Contractor:* Sommer Bros., Buffalo.

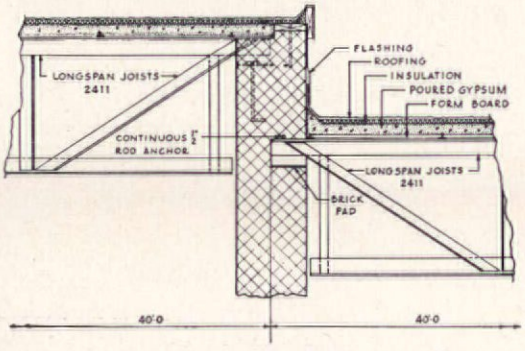
SHOPPING CENTER NEAR BUFFALO ROOFED WITH STEEL JOISTS

Typical of the trend toward fully integrated suburban shopping centers is the Thruway Super Plaza at Cheektowaga, N. Y., just outside Buffalo. With its 38 stores, offering a wide variety of merchandise within the equivalent of two city blocks—and plenty of parking space—the Thruway Super Plaza is a shopper's dream. It enables residents of the surrounding area to fill most of their household and personal needs with only one stop, one parking space to find, and without long walks with heavy packages.

The 38 connected buildings that compose the Thruway Super Plaza are of various sizes, some with one story, others with two. All of them have Bethlehem Open Web Steel Joists in the floor and roof construction.

Wherever maximum column-free space was needed, Bethlehem Joists of the Longspan type were used. By using a total of 441 tons of Longspans, in lengths up to 50 ft, the architects gained greater freedom in planning for aisles, counters and merchandise display.

In addition, 262 tons of standard-type open-web joists were supplied by Bethlehem for locations where spans of unusual length were not required. These joists, when used in floor construction in combination with concrete floor slabs and plaster ceilings, form a floor structure with fire-resistance of from one to four hours, depending on the thickness of the slab and type of plaster used.



Typical section of through party wall between stores of different ceiling height.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM OPEN-WEB STEEL JOISTS

BETHLEHEM STEEL

In HOSPITAL *planning*

Specify:

for Cleanliness... Fine Appearance
Easy Maintenance... Enduring Serviceability

For hospitals and for every public building, where appearance, sanitation and ability to stand the hardest usage are vital, Weisart toilet compartments are the logical choice. Their enduring serviceability has a triple protection: (1) flush steel construction with edges locked and sealed, galvanized surface smooth as furniture steel (2) Bonderized for additional corrosion resistance and positive adhesion of enamel (3) synthetic primer and enamel separately baked, combining highly protective surface with lustrous beauty in choice of 24 colors! Ceiling-hung Weisart compartments leave floor clear for cleaning. For detailed information write

HENRY WEIS MFG. CO., INC. *303 Weisart Bldg., Elkhart, Ind.*

AE LITERATURE

(*Continued from page 212*)

LIGHTING

• *Smithcraft Area Illumination.* This "pony catalog" contains condensed but complete information on illumination, commercial and industrial fluorescent fixtures and troffers. The booklet is useful as a cross-index of fluorescent lighting. 8 pp., illus. *Smithcraft Lighting Division, Chelsea 50, Mass.*

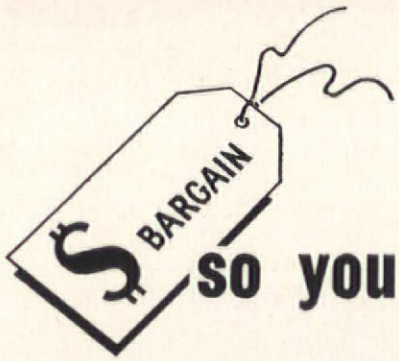
• *Caldwell-Perfeclite low brightness Three-Ring Plastic Unit. Catalog K-12428-P.* Brochure gives features and engineering data on new concentric ring lighting fixture for incandescent bulbs. Brief specifications are given, along with

Catalog features plastic ring fixture

weights and other ordering data, and a series of graphs and tables giving luminaire distribution data, light flux values, coefficients of utilization and luminaire brightness. 4 pp., illus. *The Perfeclite Co., 1457 E. 40th St., Cleveland, Ohio.*

• *Westinghouse C.I.F. Catalog 61–030* contains descriptions, ordering information, prices, outline drawings and application information on the following types of lighting: commercial, industrial, flood and ballast. 154 pp., illus. *Westinghouse Electric Corp., Lighting Div., Cleveland, Ohio.*

(*Continued on page 280*)



so you think you're saving money?

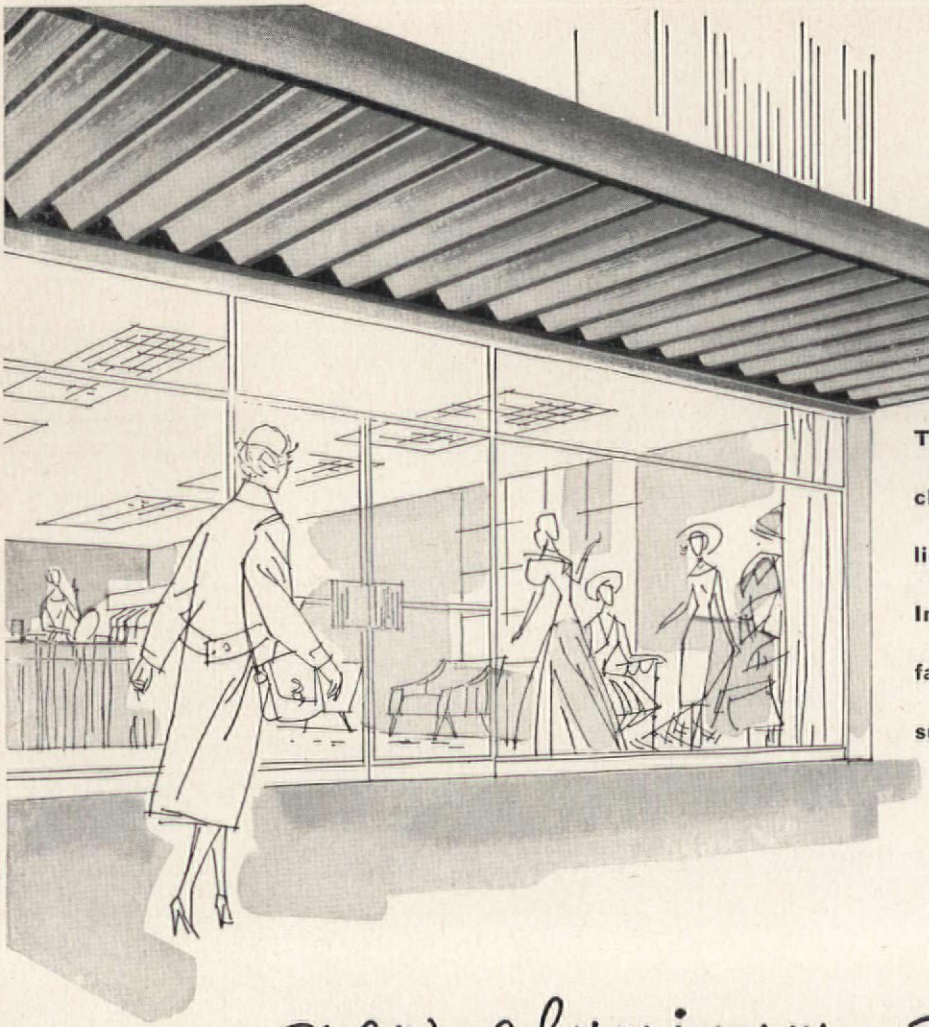
Far too often people figure lighting fixtures are all alike and buy by price tag alone. You may save a dollar or two on the price of each unit, but are you really saving money?

Today's carefully engineered lighting installations are planned with units that are designed to deliver more light at less cost. *Fewer units are required to secure the same results.* So, installation costs are less. And most important, power and maintenance costs are less during the whole life of the installation.

Take the Smithcraft DIRECTOR, for example. A recent comparison test by one of the nation's leading electric utilities clearly demonstrates that the Director produces more light and better light than ordinary fixtures.

Installed in literally thousands of banks, stores, schools and similar locations across the United States, the Smithcraft Director is in a class by itself for appearance, for quality of lighting and for soundness of investment. Be sure to get the complete story on the Smithcraft Director before relighting or when planning new installations. Ask us to send you our Smithcraft Director folder.

Photograph shows Director installation in the offices of the Credit Representative of the First National Bank of Boston, Empire State Building, New York.



The New Kawneer W-Marquee—

changes sun and sky-glare to soft light, protects against rain and snow. Installs easily on building face by attaching to cantilevered supports or tension rods.

new aluminum marquee
does so much...costs so little

Now, with the new Kawneer W-Marquee, your client's buildings and his customers can have protection against sun, sky-glare and inclement weather—at very low cost. With this protection, you get the long-lasting beauty of Kawneer's striking new design in durable, lightweight alumilited aluminum. Existing buildings and future structures can and should have all the advantages of Kawneer's W-Marquee. ***Remember Kawneer when you want sun-control products.*** Kawneer helps you control both sun and weather with the Kawneer K-Louver, Kawneer Aluminum Roll-Type Awning, and the Kawneer W-Marquee. For complete information, including full-size architectural details and the name of a nearby Kawneer Installing Dealer, write, wire or phone Kawneer, Niles, Michigan.

Advantages of new Kawneer W-Marquee:

PROTECTS CUSTOMERS
against sun • against rain • against snow

IMPROVES STORE FRONT APPEARANCE
all alumilited aluminum eye-catching design
stops street, sun and sky-glare, filters light

LOW MAINTENANCE COSTS
nothing to rot, burn, fade or wear
no raising or lowering • no parts to wear out

CONFORMS TO MOST BUILDING CODE REQUIREMENTS
Strong, rugged construction • designed to carry a live load of 40 lbs. per sq. ft.

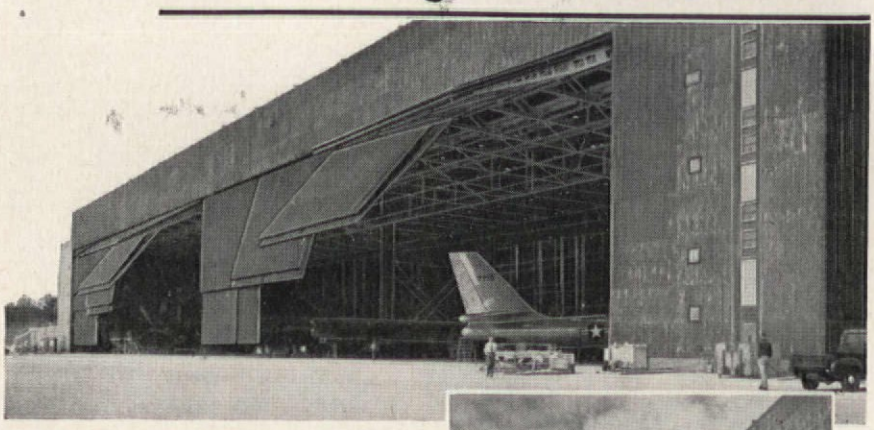
Designed by Albert Kahn Associated Architects & Engineers; J. J. Golub, M. D., *Consultant*

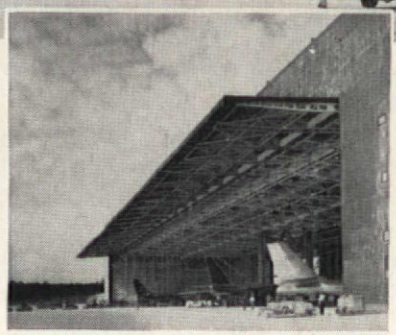
MODERN DOOR CONTROL BY *LCN* · CLOSERS CONCEALED IN DOORS

SINAI HOSPITAL, DETROIT, MICHIGAN

LCN CATALOG 14 ON REQUEST OR SEE SWEET'S • LCN CLOSERS, INC., PRINCETON, ILLINOIS

ALL DOOR and 352 yards WIDE





engineered and built for
LOCKHEED AIRCRAFT CORP.
Georgia Division, Marietta, Ga.
by INTERNATIONAL STEEL
in co-operation with
ROBERT & CO. Associates,
Atlanta, Ga.: Architects & Engineers
BLOUNT BROS. CONSTRUCTION CO.,
Montgomery, Ala.: Contractor

You have to put up a BIG front for a flight hangar like the above — part of the immense Government Aircraft Plant No. 6, where Lockheed is producing Boeing-designed B-47's for the Air Force. And you have to all but fill it with doors, to provide an entrance huge enough for these giant Air Force Jets.

Lockheed's own needs were for 16 door sections — each 66 feet wide by 60 feet high — divided equally to form a dual-opening entrance. Each section operates singly — or any and all can be opened or closed concurrently. This adds up to two complete entrances each 528 feet wide — a total of 352 yards of combined door!

International was Lockheed's logical choice to handle this tremendous job. In operation, it duplicates other larger entrances designed and built by International. Much of the basic planning of these record-breaking projects was done with the help of International's door engineers.

This same experienced help can be put to work on your door problems . . . and on any problem involving steel fabrication . . . by calling in International. Mail coupon today for our complete catalog of Industrial and Aviation Doors.

INTERNATIONAL STEEL COMPANY
2002 Edgar Street, Evansville, Indiana
Send me, without cost or obligation, my personal copy of the new "International Doors for Industry and Aviation":

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TITLE _____
ADDRESS _____
CITY _____ ZONE ____ STATE ____

INTERNATIONAL SERVICE

INTERNATIONAL STEEL COMPANY

AEH LITERATURE

(*Continued from page 276*)

• *Litecraft Domelites Architectural Bulletin No. 554e.* This brochure catalogs the complete Litecraft line of pendant, surface-mounted, recessed and adjustable Domelites, and presents descriptions, technical data and vital statistics for more than fifty different styles. It also contains several new Domelites never shown before. 7 pp., illus. *Litecraft Mfg. Corp., Dept. RE, 8 East 36th St., N. Y. C.**

SCREENING

Owens-Corning Fiberglas Screening. Folder gives features of new screening woven of glass fibers. Qualities, test results and physical properties are covered. 4 pp., illus. *Owens-Corning Fiberglas Corp., Industrial Textile Div., 16 E. 56 St., New York 22, N. Y.*

WINDOWS

Modernaire, A four-page brochure telling of the features of modular awning-type panel windows, includes the dimensions of the basic units, typical combinations, and diagrams of installation. *Builders Products, Inc., Box 374, Station D, Cleveland 27, Ohio.*

SECTIONAL SLABS FOR ROOFS AND FLOORS

Rapidex. Booklet contains outline of the following: general description, function and utility, erection, design flexibility, acoustical properties, appearance, insulation, fire resistance, durability, economy. Also, special notes and charts are included. 6 pp., illus. *Rapidex Co. of Indiana, Div. of Spickelmier Co., 1100 E. 52nd St., Indianapolis 5, Ind.*

ENGINEERING AND SPECIFICATIONS DATA

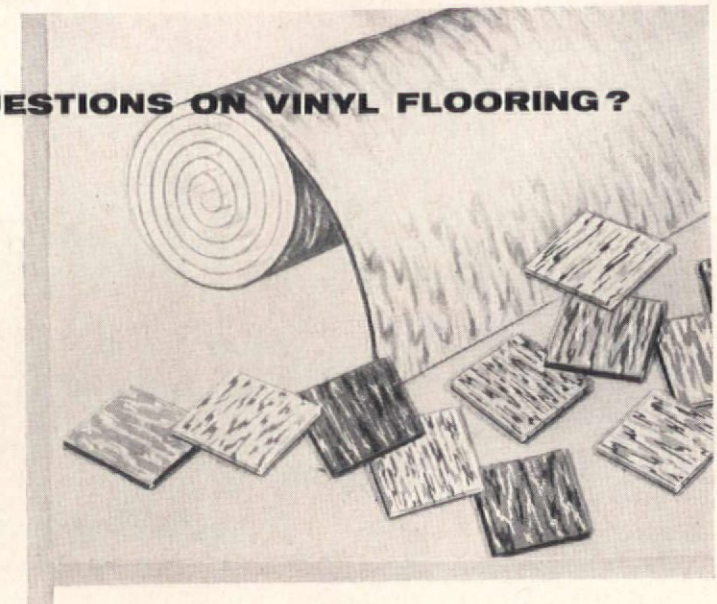
Horn Construction Data Hand Book, contains caulking and glazing compounds, construction details, defects in painting, floor materials, how to measure flat surfaces, material tables, miscellaneous specialties, moisture repellents, paints and coatings, products index, purpose index, roofing products, weights and measures tables. 106 pp., illus. *A. C. Horn Co., Inc., 10th St. & 44th Ave., Long Island City, N. Y.*

(*Continued on page 284*)

CAN YOU ANSWER THESE QUESTIONS ON VINYL FLOORING?

You should know...

but do you?



Does the thickness of flooring determine its wearability?

No. Vinyl has a much higher resistance to abrasion than other types of resilient flooring. For example, SLOANE-Delaware's Flor-Ever, tested with other types under identical abrasion tests, has shown up to double the abrasion resistance. Thus, you can see that even when thinner, Flor-Ever can outwear thicker materials.

Can any type of vinyl tile be installed over concrete below grade?

No, because vinyl products with backings cannot withstand alkali or moisture drawn through concrete. For positive assurance on below grade installations over concrete, insist on Flor-Ever Vinyl Asbestos Tile—a calendared composition of vinyl and asbestos which *cannot* be harmed or discolored by moisture and alkali.

Does the dimensional stability (expansion and contraction) of different types and brands of vinyl tiles vary?

Yes. Many manufacturers have had expansion and contraction problems in making vinyls. SLOANE-Delaware, after years of experience making and marketing *every* form of vinyl flooring known, has developed exclusive processes for *absolute control* of dimensional stability of vinyl tiles. This stability (which is *better* than the requirements of existing Federal specifications) is now GUARANTEED in all Flor-Ever Vinyls.

Do you know what flooring will wear best in heavy traffic areas?

Actual tests have shown that Flor-Ever Supreme Tile wears longer than any other type of resilient flooring. Flor-Ever Supreme – made from "clear" virgin vinyl – is the finest resilient tile available.

Where is the only source that can supply your complete VINYL flooring requirements?

Your Sloane-Delaware dealer has the only complete line of vinyls for *all* types of installations – on grade, above grade and below grade:

FLOR-EVER® STANDARD *by the yard and tile*

FLOR-EVER® VINYL ASBESTOS TILE

FLOR-EVER® UNIVERSAL TILE

FLOR-EVER® SUPREME TILE

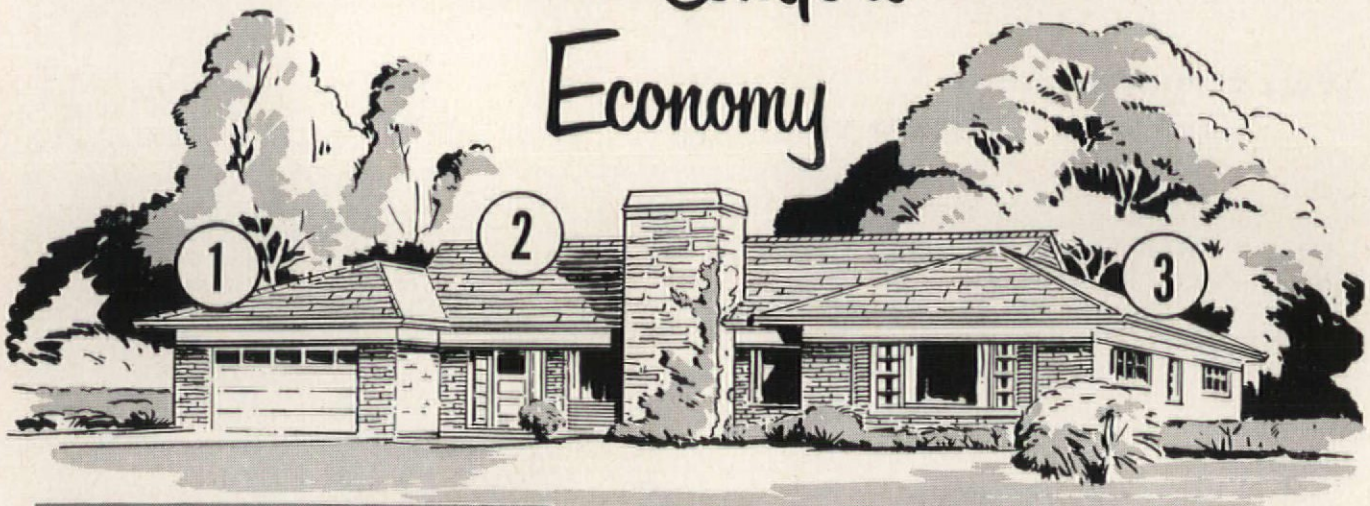
FLORAN – *Rotogravure Printed, Vinyl Plated, by the yard*

For complete, impartial, factual information that will be a ready reference on ALL types of vinyl floors . . . write Special Services Division, Sloane-Delaware Superior Floor Products, Trenton, N. J

Sloane Delaware

SUPERIOR FLOOR PRODUCTS

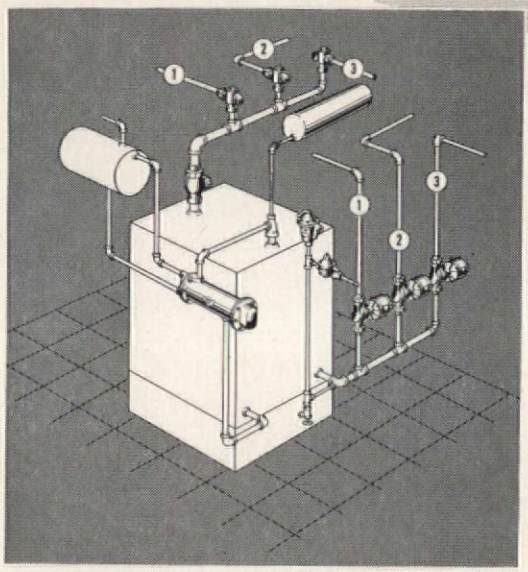
ZONED FOR HEATING *Comfort* AND *Economy*



ZONE 1 Garage, Utility

ZONE 2 Bedrooms

ZONE 3 Living Area



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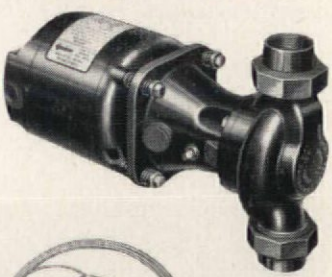
ZONED HEATING is popular in the modern home because it increases comfort and reduces fuel costs. Zoning is easy and inexpensive with Thrush Radiant Hot Water Heat. You can provide perfect zoning with coils, radiant baseboards, radiators or convectors. As many zones as may be required can all be supplied from one boiler and firing device.

Apartments, motels, store buildings as well as residences can be zoned with just three simple units, a Circulator, a Flow Control Valve, and a Radiant Heat Control (with Relay Transformer) in each additional zone. Heat is transmitted only when needed in any zone without affecting other zones.

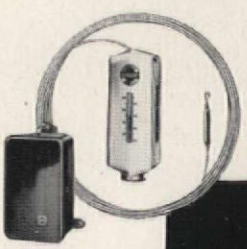
For more information about the inexpensive zoning possible with Thrush Radiant Hot Water Heat, see our catalog in Sweet's or write Department J-3.

JUST THREE SIMPLE UNITS IN EACH ZONE

Thrush Water Circulator



Thrush Flow Control Valve



No. 200

No. 201 Radiant Heat Control

H. A. THRUSH & COMPANY
PERU, INDIANA

aluminum WINDOWS *by* GENERAL BRONZE

● Whether the hospital building you plan is to be a part of a large medical center in a metropolitan city like the one shown here or a small, one story all-purpose hospital in a small town, there's one thing to keep in mind. Low annual maintenance costs are of paramount importance in enabling any hospital to meet its budget.

Because aluminum windows by General Bronze satisfy every requirement for permanent beauty, easy, efficient operation, controlled ventilation, freedom from cold drafts and rain, and because they never need painting and are easy on the annual maintenance budget, they are preferred and specified by leading architects and by hospital authorities in every section of the country.

QUALITY APPROVED

A.W.M.A. Quality Specifications—Materials, Construction, Strength of sections and Air infiltration requirements—confirmed by Pittsburgh Testing Laboratory.

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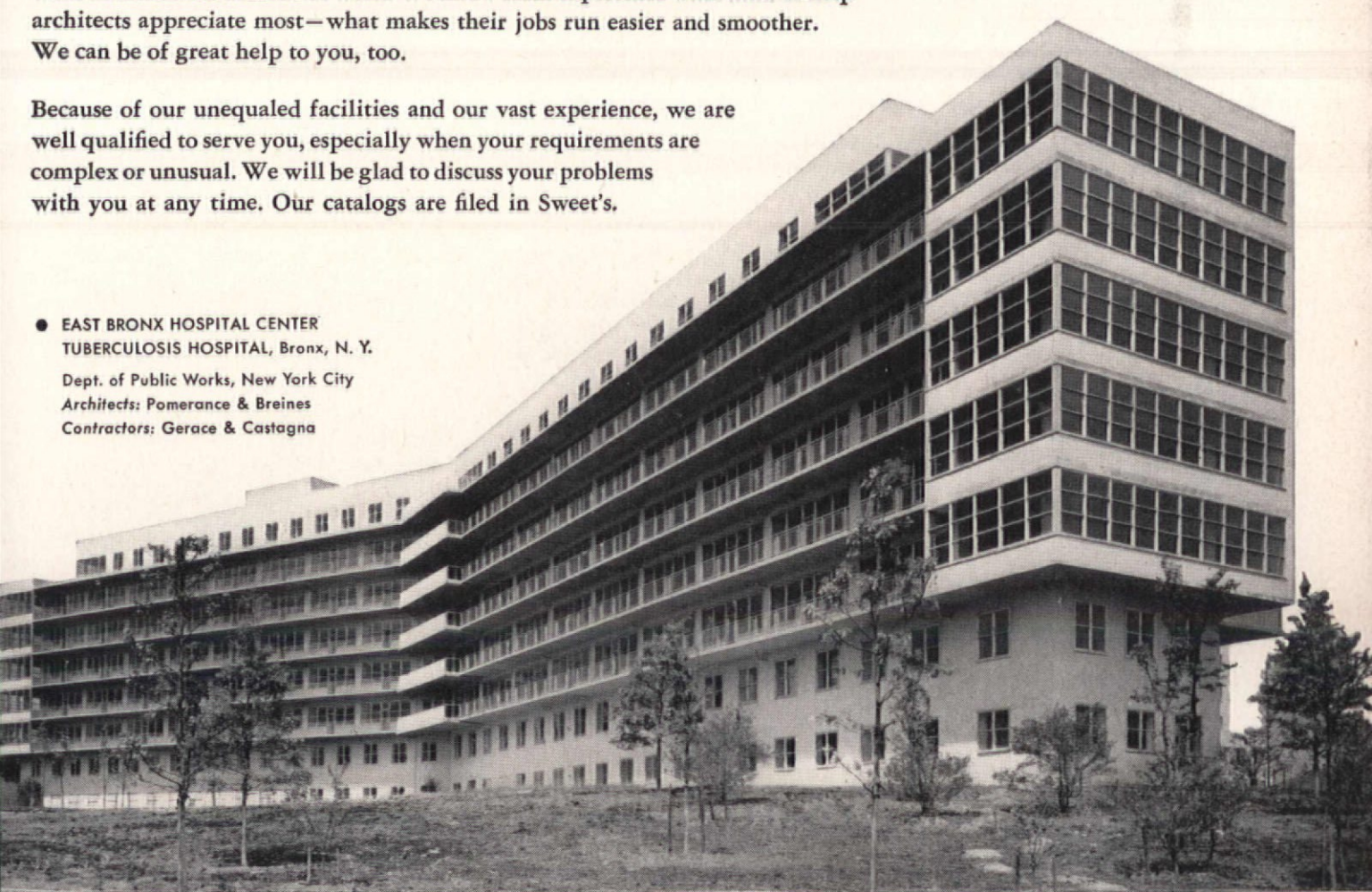
As you plan new buildings—hospitals, schools, apartments or commercial buildings—take full advantage of the service and 40 years of practical experience General Bronze offers in solving your problems as they pertain to windows, spandrels, curtain walls and architectural metal work. We know from experience what kind of help architects appreciate most—what makes their jobs run easier and smoother. We can be of great help to you, too.

Because of our unequaled facilities and our vast experience, we are well qualified to serve you, especially when your requirements are complex or unusual. We will be glad to discuss your problems with you at any time. Our catalogs are filed in Sweet's.



● EAST BRONX HOSPITAL CENTER
TUBERCULOSIS HOSPITAL, Bronx, N. Y.
Dept. of Public Works, New York City
Architects: Pomerance & Breines
Contractors: Gerace & Castagna

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PERMATITE DIVISION—Custom-built Windows, Architectural Metal Work and Revolving Doors. **ALWINTITE DIVISION**—Residential Aluminum Windows.
BRACH MFG. CO. DIVISION—Multel, T. V., Radio and Electronic Equipment **STEEL WELDMENTS, INC. DIVISION**—Custom fabrication in steel and iron.

For Industrial Roofing & Siding

specify Grade-Marked

Galvanized Sheets

for PEAK PERFORMANCE

Engineers and designers of industrial and commercial buildings know galvanized sheets to be superior building material for this type of construction—particularly for roofing and siding. They know that time-tested galvanized sheets offer:

- **SHORT-TERM *plus* LONG-TERM ECONOMY**
  Low *initial* cost, low *application* cost, low *per-year* cost
- **STRENGTH OF STEEL; RUST-PROTECTION OF ZINC**
  Withstand rough treatment, add structural strength and are fireproof

All galvanized sheets give years of useful service. But the *heavier* the zinc coating, the *longer* the life of the base sheet. Because various weights of zinc coating look alike on the surface, it pays to *specify a grade-marked sheet* . . . Get the heaviest coating you can buy!

IT'S THE ZINC THAT STOPS THE RUST

For long, rust-free service, specify a heavy duty sheet such as the "Seal of Quality" with a zinc coating of *2 ounces per square foot.* For heavier coatings order according to ASTM Specification A 93.

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AIA LITERATURE

(*Continued from page 280*)

TEMPERATURE MEASUREMENT

Resistance Thermometer Bulbs Catalog 5701 lists Brown resistance thermometer bulbs that reportedly withstand a temperature span as narrow as 20 F. continuously. Illustrated are resistance bulbs of high speed, marine, room temperature and sanitary types. Also included are wet and dry bulb resistance thermometer assemblies for measurement of relative humidity. 16 pp., illus. *Minneapolis-Honeywell Regulator Co., Industrial Division, Wayne and Windrim Aves., Philadelphia 44, Pa.*

PRE-FINISHED METALS

Prefinished Nickeloid Metals. Catalog gives extensive illustrated data on patterns, finishes, and applications of Nickeloid metals. The preplated finishes include chromium, nickel, brass and copper on the following base metals: steel, zinc, brass, copper, aluminum. A table of properties and sizes of the various combinations is given as well as a series of notes on fabrication, and production techniques. 24 pp. illus. *American Nickeloid Co., Peru, Ill.*

CONSTRUCTION SUPPORT

Hico Girders. Booklet describing new type of form support for construction of reinforced concrete or precast block floors, ceilings and arches. Advantages of this product, detailed description, handling, and design and erection chart included. 11 pp., illus. *Webrib Steel Corp., 120 Broadway, New York City.*

LITERATURE REQUESTED

The following individuals and firms request manufacturers' literature:

- J. Robert Bence, Architect, 1733 Westridge Circle, Casper, Wyo.
- Dan MacMillan, Architect & Associates, 301 Green St., Fayetteville, N. C.
- Nefe & Diek, Architects, 2120 W. Well St., Milwaukee 3, Wis.
- Philip R. Soloway, Architect, 617 Landis Ave., Vineland, N. J.

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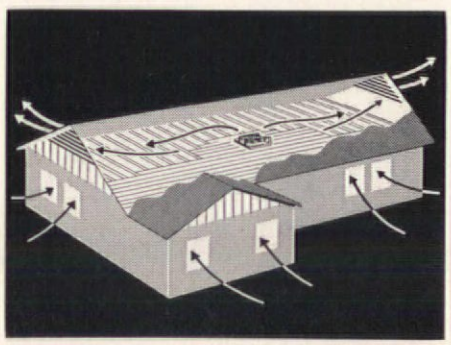

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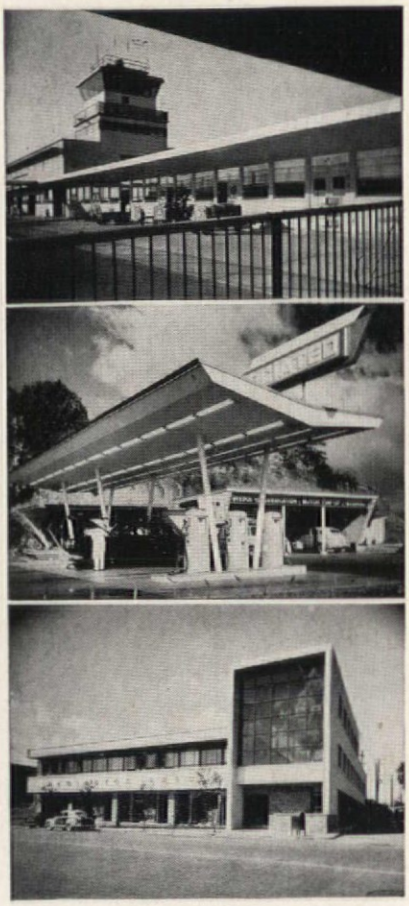

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- how the American habit of travel, greatly magnified in recent years, has promoted better design in airport buildings, rail and bus terminals, and roadside service stations
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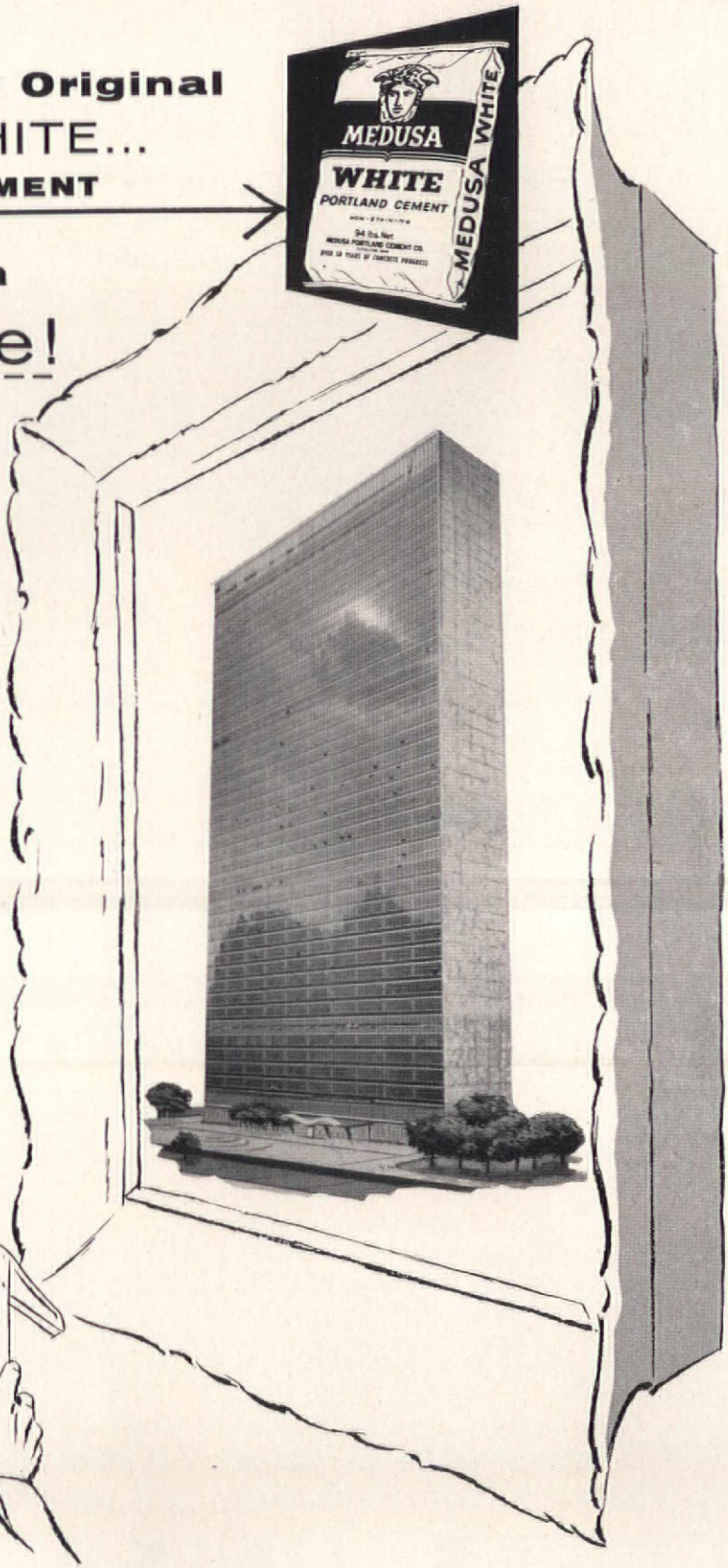

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Notice the soft, well-diffused light provided by these Sylvania IC Low-Brightness Fluorescent Fixtures in this modern classroom installation. *Architect:* Joseph Hoover, Hoover Bldg., Pittsburg, Penna. *Electrical Engineer:* Elwood S. Towers, Investment Bldg., Pittsburgh.

In planning this handsome new junior high school, educational authorities, architects, and lighting engineers agreed that the new Sylvania IC Low-Brightness Fluorescent Fixtures met their strict requirements for uniform light distribution, quick easy installation, low maintenance, and attractive appearance. The 40-watt T-17 low-brightness lamps minimize reflected glare, and the excellent 42° crosswise shielding shields the lamps from direct view.

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THE RECORD REPORTS

1955 Budget (*Continued from page 20*)

5000 classrooms for 140,000 children. The budget also contains a $59 million recommended appropriation for school operating assistance. This is $14 million below the amount for fiscal 1954.

Hospitals — Here the new budget calls for a sizeable reduction in appropriations for Hill-Burton hospital construction but adds some $62 million in authorization for building hospitals for the chronically ill, diagnostic centers and nursing homes. The budget message posed as one main element of the public health program "a broadening of the present Federal grant-in-aid program for hospital construction to stimulate provision of diagnostic and treatment centers, rehabilitation facilities, nursing homes and additional chronic disease hospitals, and to help finance state surveys of their needs for such facilities."

Appropriation of $50 million for the Hill-Burton program would continue the downhill slide in outlays for these private hospitals. The current year's figure is $65 million, and fiscal 1953 saw $75 million spent in Federal monies. The Budget Bureau estimates that $50 million will stimulate construction of about 150 hospitals. Addition of these would bring to 2306 the number approved under the Hill-Burton law.

Housing — Activities of the Federal National Mortgage Association and increased use of private financing for the public housing program have enabled the Administration to show a $277 million credit in net estimated expenditures for all housing purposes in fiscal 1955. Gross outlays are placed at $1903 million and receipts will exceed these by the $277 million, the budget indicated. The net figure compares with an expenditure of $549 million in 1953 and revised estimates of $57 million in 1954.

The budget was critical of present housing programs, describing them as "designed in the main to meet short-run emergencies or . . . developed piecemeal without a clear underlying policy. As a result, housing laws have become a patchwork which only experts can understand."

It was pointed out that most local projects approved for Federal assistance

(*Continued on page 290*)

Sensational, New Axial Flow Ventilator

By TRADE-WIND

TREMENDOUS SUCTION . . . UNUSUALLY QUIET . . . PRIZE DESIGN!

Terrific performance at half the power—unmatched beauty—and tagged with a low L-O-W price is this new AXIAL FLOW ventilator which Trade-Wind has developed under wraps over the past three years.

This revolutionary ALL NEW design now for the first time brings all the great advantages of straight-through axial air flow to the home ventilator field—and at a price that makes kitchen ventilation a BIG feature even for the lowest priced house.

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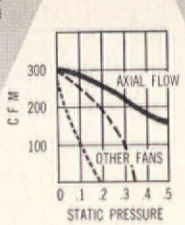
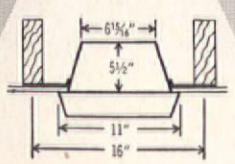
REVOLUTIONARY PERFORMANCE of the AXIAL FLOW is indicated in this chart. Note the ability to overcome duct resistance — characteristic of *all* Trade-Wind ventilators.



Write or Wire for Complete Information

STYLED BY HUNT LEWIS. The outstanding originality of the Trade-Wind AXIAL FLOW styling was created by Hunt Lewis, nationally famous industrial designer.



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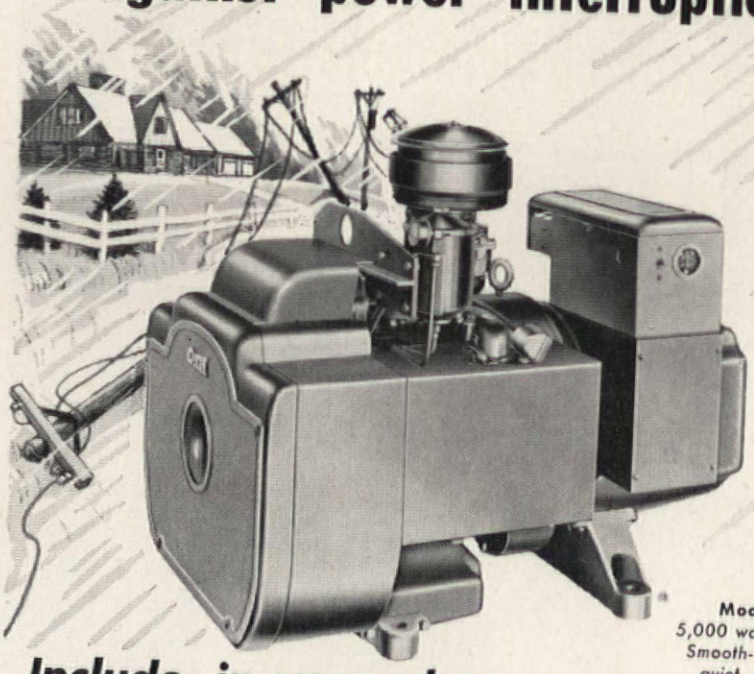

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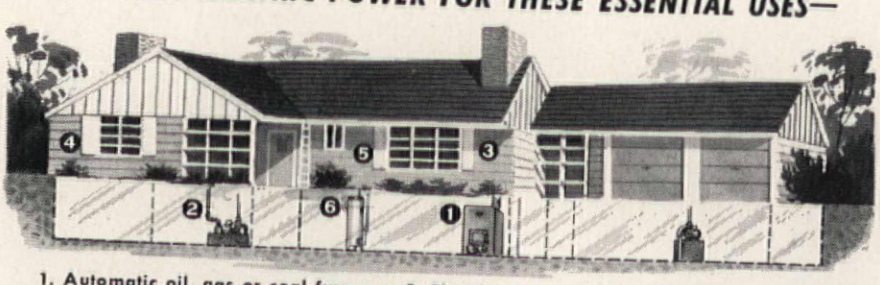

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Onan ELECTRIC PLANTS

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THE RECORD REPORTS

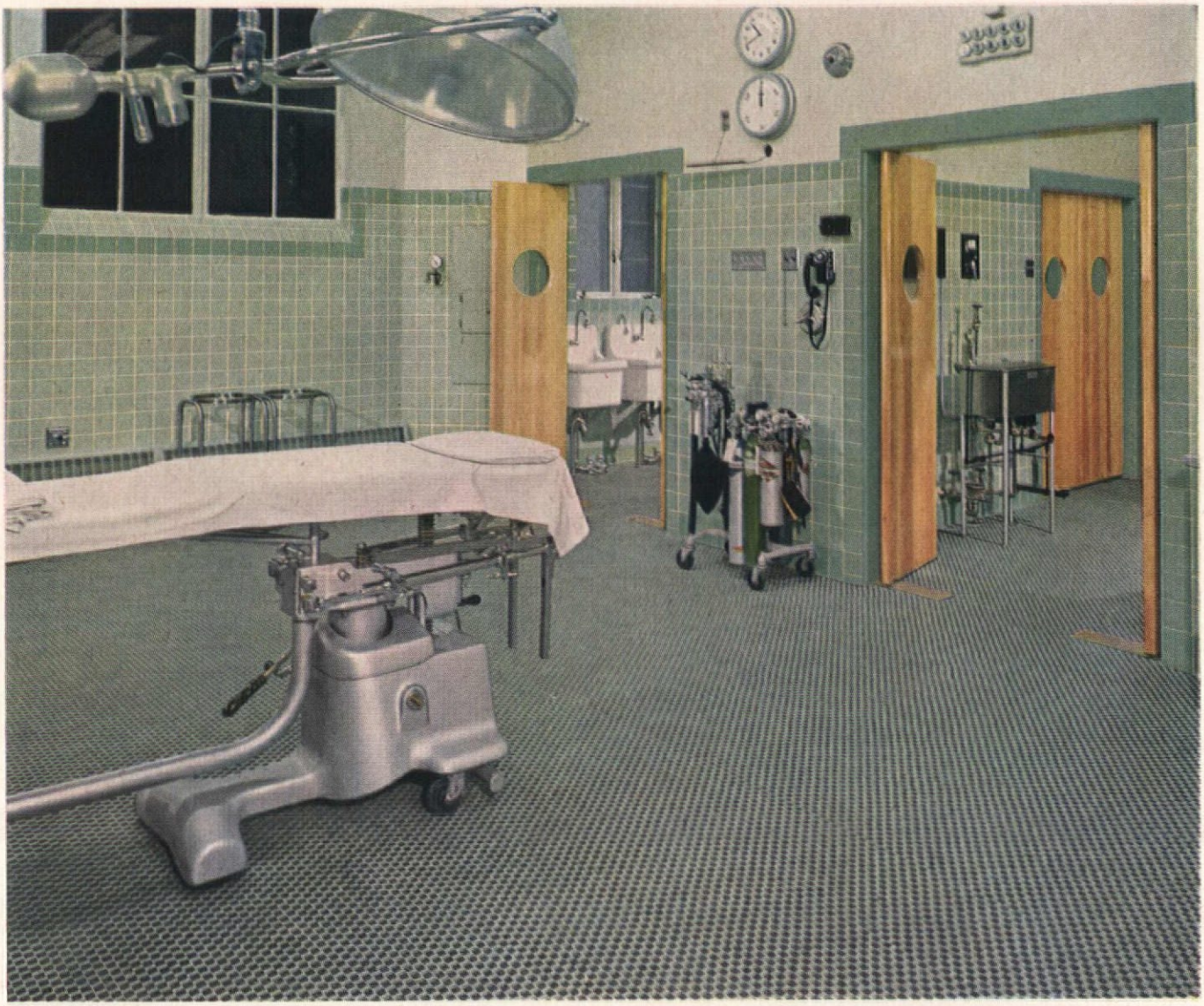
1955 Budget (*Continued from page 288*)

are still in the planning stage. By the end of fiscal 1955, it is expected clearance and redevelopment will be completed or under way on 180 projects. Approximately 50 had been started by the first of this year. The President said urban redevelopment requires (1) enlistment of greater local and private participation, (2) slum prevention as well as elimination, and (3) rehabilitation of rundown houses and neighborhoods.

A shuffling of the secondary mortgage market operation was expected to entice more private funds into housing loans. Also asked was a sliding scale authority for establishing maximum interest rates on government-backed mortgages. The Administration argued that the greater flexibility would encourage an adequate but not excessive supply of private mortgage funds for all parts of the country. This proposal, said the budget, would make unnecessary any large future purchases of mortgages by the government such as those required in the past when FHA- and VA-guaranteed mortgages were unattractive to private lenders.

Civil Defense — The budget reflected a new concept of civil defense. As Budget Director Joseph M. Dodge put it, "we are buying space instead of shelter." This was a reference to the continuing policy of trying to arrange for people to get out of heavily-populated areas in event of attack, rather than for them to seek shelter within these metropolitan locations. More stress is being laid on improving warning systems and on dispersal of populations. No funds were proposed for construction of mass shelters.

A line of demarcation between Federal, and state and local, responsibility was drawn by the budget message: "It will be the Federal responsibility . . . to provide warning of impending attacks, and to stockpile medical supplies. The Federal government will not assume the responsibilities which belong to local governments and volunteer forces, but will supplement state and local resources, provide necessary information on weapons effects and advise and assist states and localities." A sum of $68 million was proposed as the Federal outlay for these purposes in fiscal 1955.



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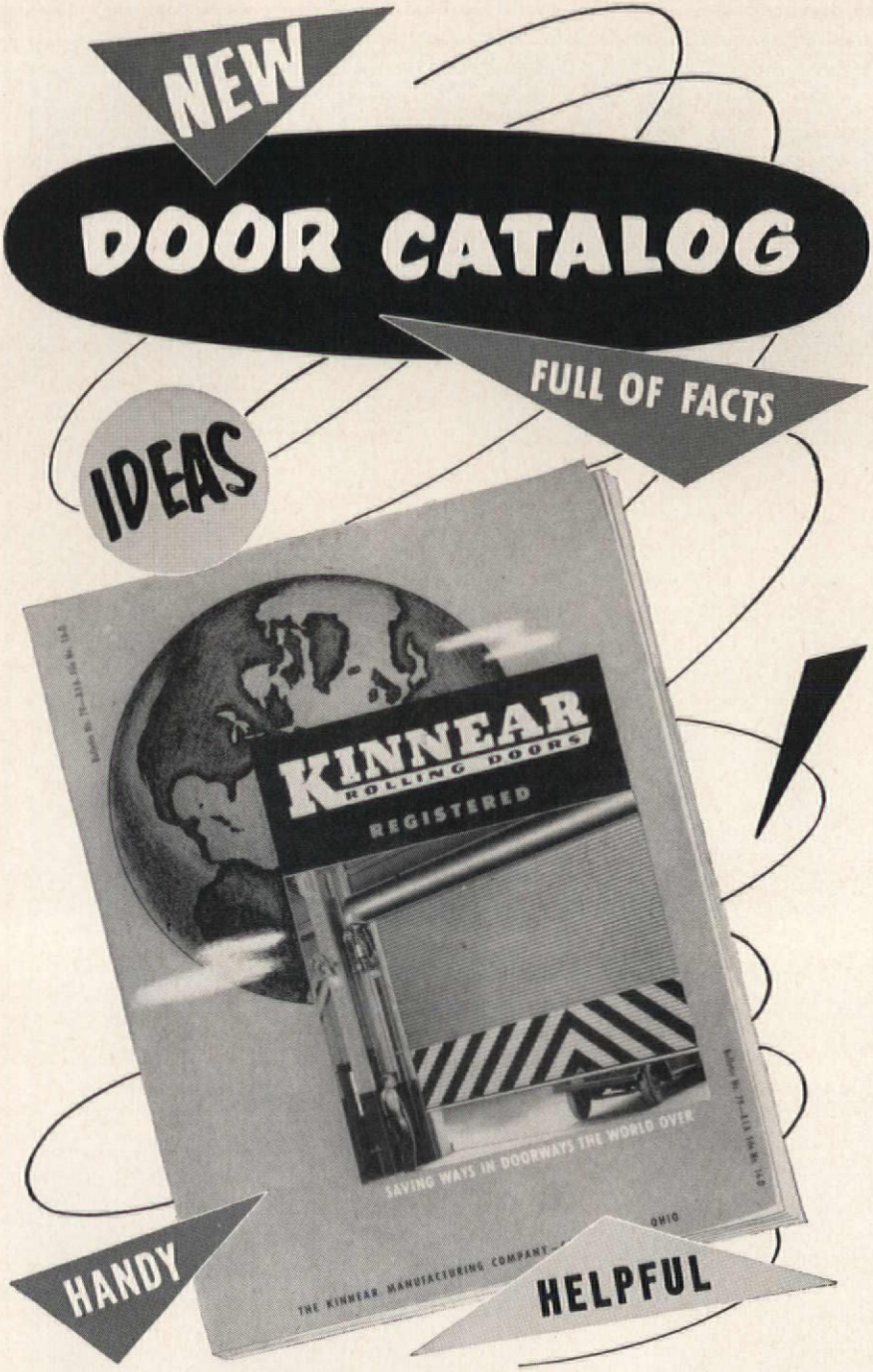

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It gives you full, up-to-the-minute information on how to save maximum space, cut costs, boost efficiency and get more protection at doorways in old or new buildings. In addition to complete data on Kinnear Steel Rolling Doors — the doors with the famous, *Kinnear-originated* curtain of interlocking steel slats — it tells all about Kinnear Steel Rolling Fire Doors, sectional-type Kinnear RōL-TOP Doors, and the protective Kinnear® Steel Rolling Grilles. Write for your FREE copy TODAY!

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THE RECORD REPORTS

WASHINGTON

(*Continued from page 38*)

PRESIDENT WOULD EXTEND HOSPITAL AID PROGRAM

If Congress accepts the President's proposals for construction of health facilities, architects will be designing diagnostic centers, nursing homes and hospitals for the chronically ill as well as the more conventional types of hospitals under the Hill-Burton Act.

In a special message transmitted to Congress in January, President Eisenhower praised the accomplishments of the Hill-Burton program, but insisted it did not go far enough in providing all types of health facilities required in this country.

Not all illness needs to be treated in elaborate general hospitals that are costly to construct and operate, the President said. Certain non-acute illness conditions, including those of aged people requiring institutional bed care, can be handled in facilities more economical to build and operate than general hospitals, with their diagnostic, surgical and treatment equipment and full staffs of professionals.

Today, said the Chief Executive, beds in our hospitals for the chronically ill take care of only one out of every six persons suffering from such long-term illnesses as cancer, arthritis, and heart disease. It was pointed out that if there were more nursing and convalescent home facilities, beds in general hospitals would be released for the care of the acutely ill, and it might also help to relieve some of the serious problems created by the present shortage of trained nurses.

The President is thinking in terms of special facilities for the treatment of special ailments. Many thousands remain disabled due to the lack of such facilities and services, he maintained.

The health message carried these recommendations for amendments to Hill-Burton:

1. Added assistance in the construction of non-profit hospitals for the care of the chronically ill. These would be of a type more economical to build and operate than general hospitals.

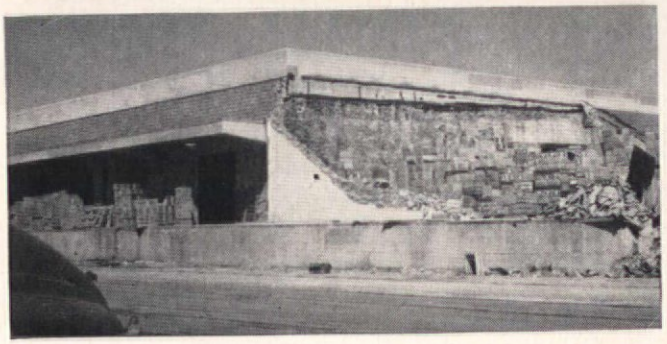
2. Assistance in the construction of non-profit medically supervised nursing and convalescent homes.

(*Continued on page 296*)

Though 50% of this block was destroyed, the Roosevelt Hotel (background) with reinforced concrete frame and floors came through undamaged structurally.

Reinforced Concrete Construction Withstands Destructive Waco, Texas Tornado

Above: Two-story building at right with reinforced concrete floors, walls and roof came through the tornado without structural damage but the adjacent structure suffered extensively. Below: This one-story warehouse was built in two sections. The section with reinforced concrete frame, floors and roof was undamaged; the other part was demolished.



The tornado that struck Waco, Tex. on May 11, 1953 killed 115 persons and wrecked property worth millions of dollars. It ripped a path of destruction one mile wide and four miles long.

Nevertheless some buildings within this area of devastation withstood the full fury of the tornado. An engineering report made following a thorough examination of the damage said, "Without exception structures with reinforced concrete frames suffered little damage."

This is graphic evidence that reinforced concrete construction can "take it." Schools, hospitals, factories, office buildings, apartments —any structure—can be designed in concrete to resist the violent lateral forces and bursting pressures of tornadoes, hurricanes and atomic blast.

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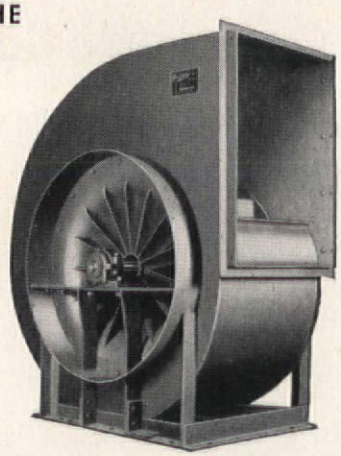

Briefly, the secret of the "Hush-A-Bye" quiet of the new "Buffalo" Type "BL" Limit-Load Ventilating Fan is *smooth* air handling. From inlet to outlet, air is moved through the fan almost "without a ripple". This new standard of air handling promises important benefits in any building where quiet is an efficiency factor. Why not see the engineering facts — the "Q" Factor* — behind this great new fan?

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VENTILATING FORCED DRAFT AIR CLEANING COOLING AIR TEMPERING HEATING INDUCED DRAFT PRESSURE BLOWING EXHAUSTING

WASHINGTON

(*Continued from page 294*)

3. Assistance in the construction of non-profit rehabilitation facilities for the disabled.

4. Assistance in the construction of non-profit diagnostic or treatment centers for ambulatory patients.

A part of the Presidential plan is a new survey of state needs in these fields. This would extend surveys provided for in the Hill-Burton statute.

Legislation has been introduced to carry out the Eisenhower recommendations. The bills seek some $62 million in additional authorization to cover the additional types of facilities. The budget calls for only $50 million for construction of Hill-Burton hospitals of the present type, but a supplemental request probably will seek funds for the special construction.

ADVANCE PLANNING FUNDS SOUGHT IN 1955 BUDGET

Revival of the "advance planning" programs which meant work for private architects was sought in the fiscal 1955 budget, which provides for a $10 million authorization, and $3 million expenditure, for the advance planning of local public works.

The Administration is anxious to get the program underway, as evidenced by the announcement the request for appropriations would come as a supplemental asking for fiscal 1954, the current year.

Budget Director Dodge, when asked why the appropriation would be sought ahead of other fiscal 1955 items, said, "We want to avoid the usual hiatus connected with initiating a public works planning program."

The proposal appeared to be an out-and-out renewal of the old advance planning program. This involved direct interest-free loans to state and local governments to aid them in preparing for future expansion in public works construction.

Under the first and second advance planning programs (operating since 1944) approved advances totaled $65.1 million. These provided for construction costing an estimated $3648 million.

Last fall the Housing and Home Fi-

(*Continued on page 298*)

Thermopane windows make this library comfortable, light and cheerful. Birmingham (Michigan) High School. Architect: Swanson Associates, Birmingham.

"We can tell you what's good in school design"

"Our new school has large windows that let you see out and make the room light and cheerful. Now we don't feel 'cooped-up'."

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Most of today's truly modern schools use large areas of clear glass to banish the "cooped-up" feeling. These Daylight Walls, stretching from sill to ceiling, add a feeling of spaciousness, bring light and view inside . . . make the classroom a part of the world beyond.

School boards like Daylight Walls, too. They are economical to build (less masonry, lath, plaster and paint). Economical to maintain (glass is easy to clean, doesn't wear out). When glazed with *Thermopane** insulating glass, heating costs are lower and areas close to windows are comfortable on coldest days.

For more facts on school design, write for the booklet described below or call your nearby Libbey·Owens·Ford Distributor or Dealer. *®

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If you have anything to do with school design, you will enjoy reading the new, authoritative publication on school daylighting, *How to get Nature-Quality Light for School Children*. For a free copy write Libbey·Owens·Ford Glass Co., 4134 Nicholas Bldg., Toledo 3, Ohio.

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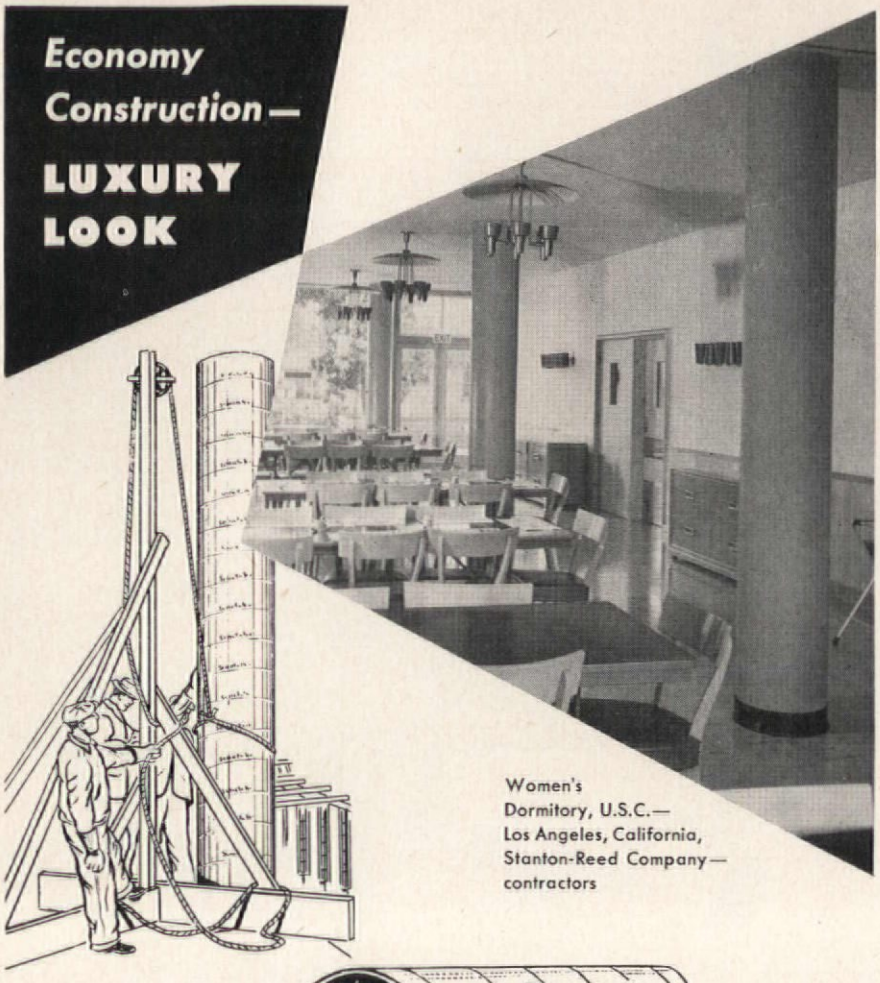

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THE RECORD REPORTS

WASHINGTON

(*Continued from page 296*)

nance Agency, which now handles the remnants of the first two programs, reported that 7757 jobs were included in all applications where advances had been approved. Plans had been completed on 7536 projects, and construction had been started and loans repaid on 3476.

SCHOOL AID BILLS WOULD FOLLOW HILL-BURTON ACT

Two bills to provide Federal aid for the construction of elementary and secondary schools in all the states were introduced early in the second session of the 83rd Congress. Altogether, the measures had 45 sponsors.

The first, proposed by Senator McClellan (D-Ark.), and 24 others, based its new formula for distribution of Federal funds on the Hill-Burton hospital construction act. Factors would be number of school students and per capita income of the state balanced against the average per capita income of the country. The idea was to channel the most money to states with greatest school building needs.

This same general plan was followed in the Hill-Sparkman bill coming a few days later. Senators Lister Hill and John Sparkman, both of Alabama, also based state share of Federal money on per capita incomes and number of children of school age.

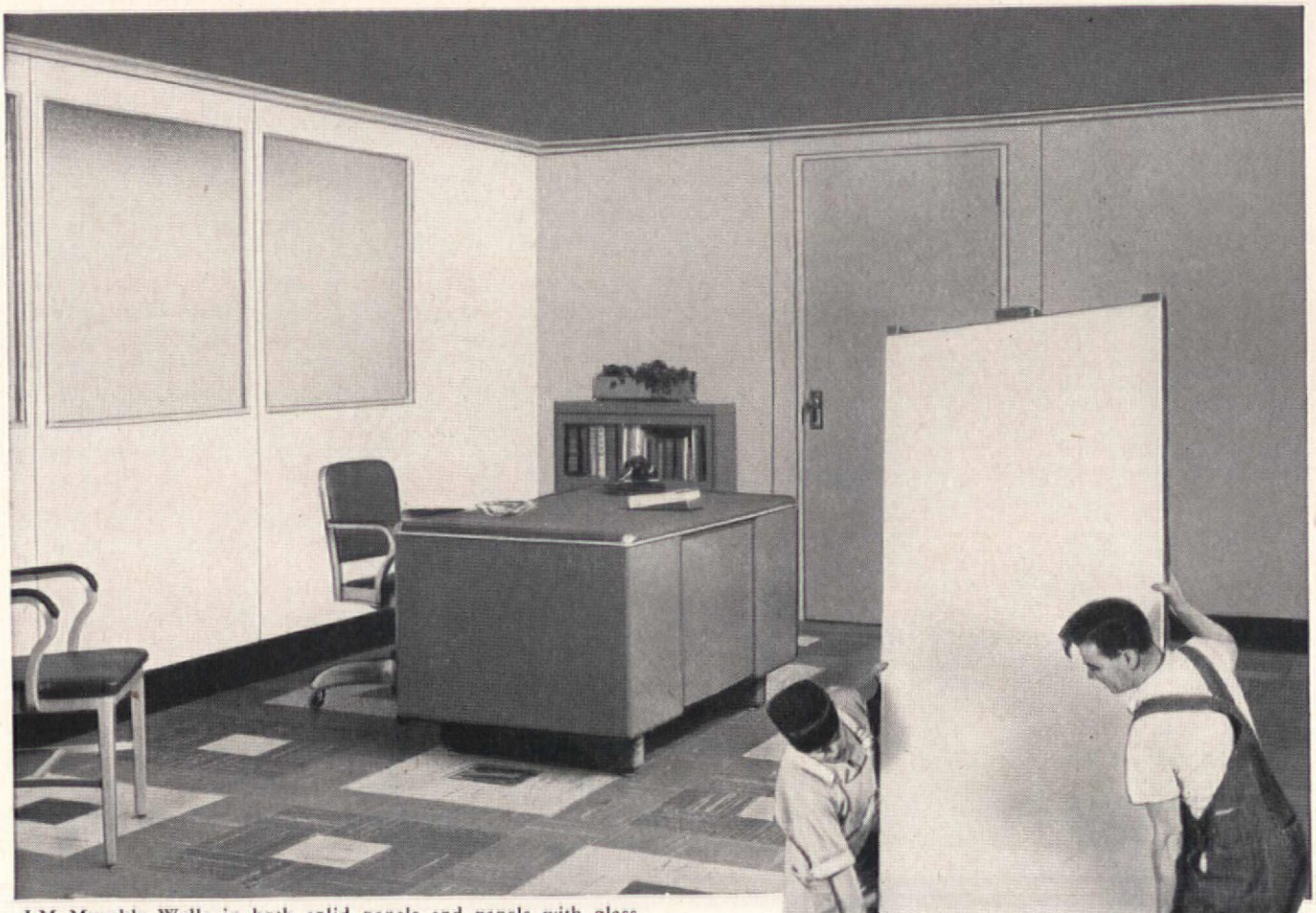
Both measures would leave administration to the states and in both instances authors declared there was need for immediate Congressional action to correct a worsening condition.

ARCHITECTS COVERED IN NEW SECURITY PROPOSAL

Architects and engineers are included in the new group of some 10 million persons who would be brought under the protection of the Old Age and Survivors Insurance System by the proposed Eisenhower program.

They were mentioned, along with doctors, dentists, lawyers and accountants, in the President's message to Congress on this subject.

(*Continued on page 300*)



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YOU can rearrange existing offices or partition new space quickly and economically with Johns-Manville Asbestos Movable Walls.

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Johns-Manville Asbestos Movable Walls may be used as ceiling-high or free-standing partitions. The complete wall, including doors, glazing and hardware, is installed by Johns-Manville's own construction men under the supervision of trained J-M engineers—*responsibility is undivided.*

For details about Johns-Manville Asbestos Movable Walls, consult your Sweet's Architectural File, or write Johns-Manville, Box 158, Dept. AR, New York 16, New York. In Canada, write 199 Bay Street, Toronto 1, Ontario.

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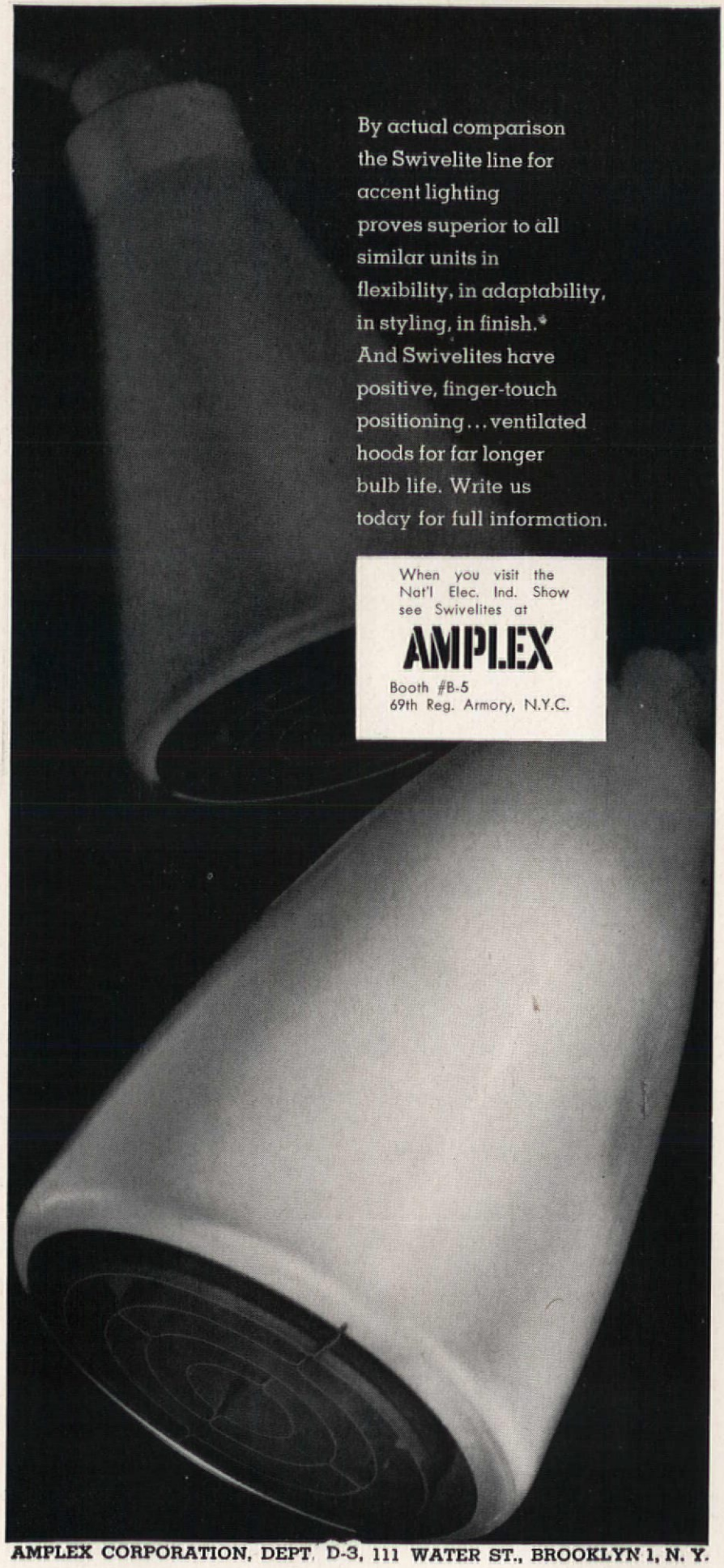


AMPLEX CORPORATION, DEPT. D-3, 111 WATER ST., BROOKLYN 1, N. Y.

THE RECORD REPORTS

WASHINGTON

(*Continued from page 298*)

The President also urged Congress to liberalize the current retirement qualifications and change the mandate to provide that a beneficiary might earn up to $1000 a year before losing any benefits. For amounts earned above $1000, only one month's benefit would be deducted for each additional $80 earned. Architects and engineers have been concerned, should they come under the system, about the present $75 per month limitation. Mr. Eisenhower said this imposed "an undue restraint on enterprise and initiative."

The American Institute of Architects, which has been conducting a chapter-by-chapter poll of its members to determine what stand by the Institute they would favor, said last month it would make no announcement until the results had been studied by the Board of Directors at a meeting scheduled early this month. The scattered results made known by individual chapters, however, showed a balance in favor of the legislation.

HOW MUCH FOR DESIGN? ARMY TREND IS UPWARD

Engineering and design of facilities constructed by the Army Corps of Engineers in fiscal 1953 cost two and one half cents of each dollar spent, and more than half of this went to private architect-engineer firms, according to a Corps report.

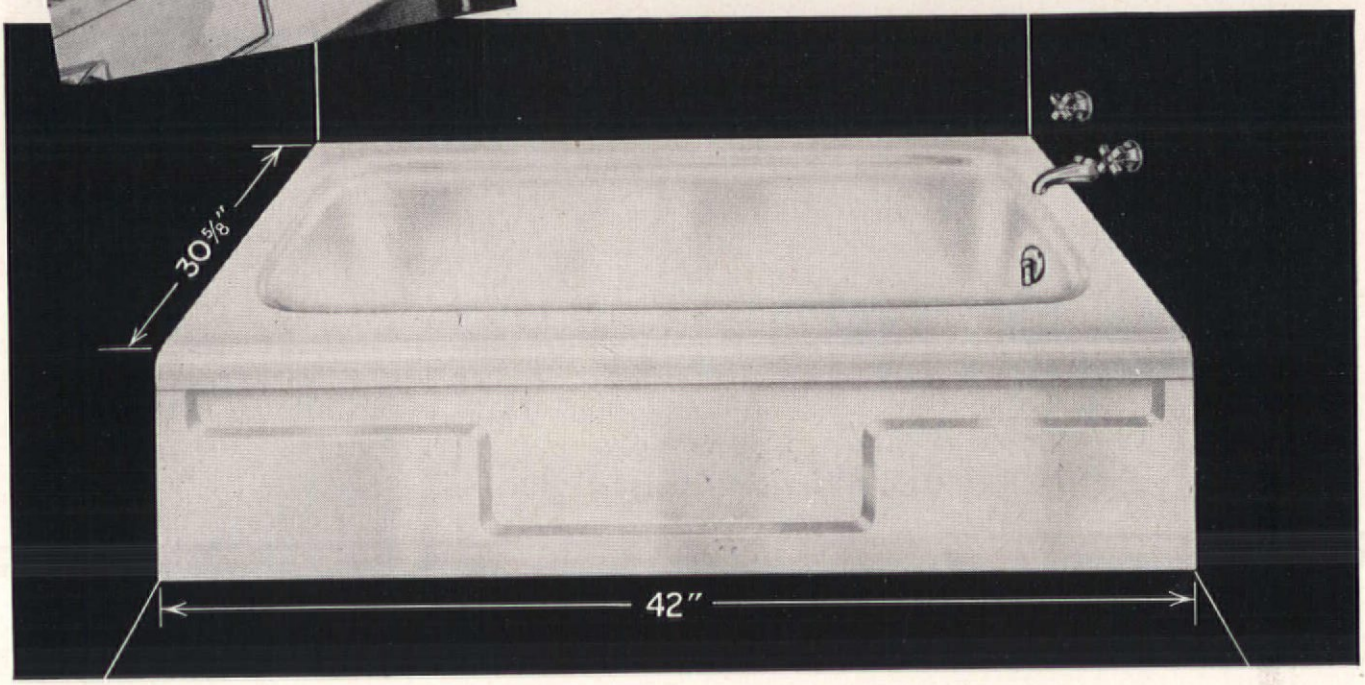
Supervision and inspection at the site cost an additional two cents, and a part of this also went to private firms. Design and field supervision costs thus came to 4.5 per cent of the total cost, a figure the Corps of Engineers believes compares favorably with the "usual fee of six per cent" paid by private industry for similar services.

Construction contractors received 93.4 cents of each dollar going into jobs completed in fiscal 1953. General "overhead" costs were considered low by the Corps — amounting to 2.1 cents of each dollar of the cost of completed jobs; that is, the stateside military construction program's share of the costs of overall administration by ACE's division and district offices.

The construction industry's 93.4 cents

(*Continued on page 302*)

FOR THAT *Extra* BATHROOM CONSIDER THIS AllianceWare "JUNIOR" SIZE BATHTUB



Quite frequently in new construction and especially on remodeling jobs, you find a demand for a second bathroom but space is at a premium. Here's where the AllianceWare "Junior Size" tub—Model B-42-S—gives you all the advantages of space-saving.

From front to back—this tub is the same as standard AllianceWare tubs—30 5/8". The length, however, is only 42"—the height is 12"—an especially convenient height for bathing small children—an easy tub for the elderly person to step into—and an excellent idea for a shower receptor.

Made from 14-gauge enameling steel, this model has every other quality feature of AllianceWare tubs. A wide seat forms the outer rim; an integral wall guard extends a full inch on three sides where the tub joins the wall; the finish is AllianceWare quality, stainproof porcelain enamel in white, pink, green, blue, tan, or grey. Write for complete information and installation diagram.

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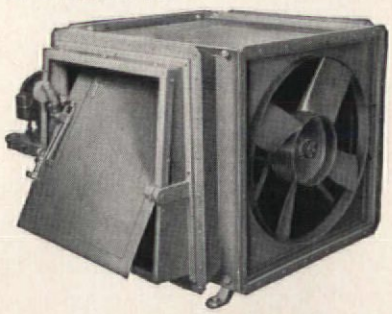

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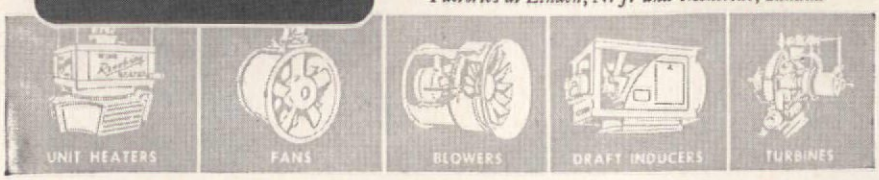


THE RECORD REPORTS

WASHINGTON

(*Continued from page 300*)

share of each dollar spent on military construction in the United States represents another gain in a steady upward trend. It compares with 91.3 cents in 1950, 91.8 cents in 1951, and 92.3 cents in 1952.

Payments to private architect-engineer firms have followed a similar pattern. The figures: .4 cents in 1950, .7 cents in 1951, one cent in 1952, and 1.3 cents in 1953.

During fiscal 1953, the Army Corps completed 190 military projects costing $145,098,108 within the United States. Still in progress the first of this year were 4045 jobs of all types with aggregate cost estimated at $2,130,291,000.

MOVE TO CURB BACKLOG OF UNOBLIGATED FUNDS

Congressional pressure is being applied to the Defense Department to curtail its huge backlog of unobligated construction funds, cut red tape in the building program, and expedite military construction all along the line. A recommendation for a $100 million cut in armed forces estimates for fiscal 1955 expenditures by a subcommittee of the House Appropriations Committee early in the new session of Congress has provided an especially sharp nudge.

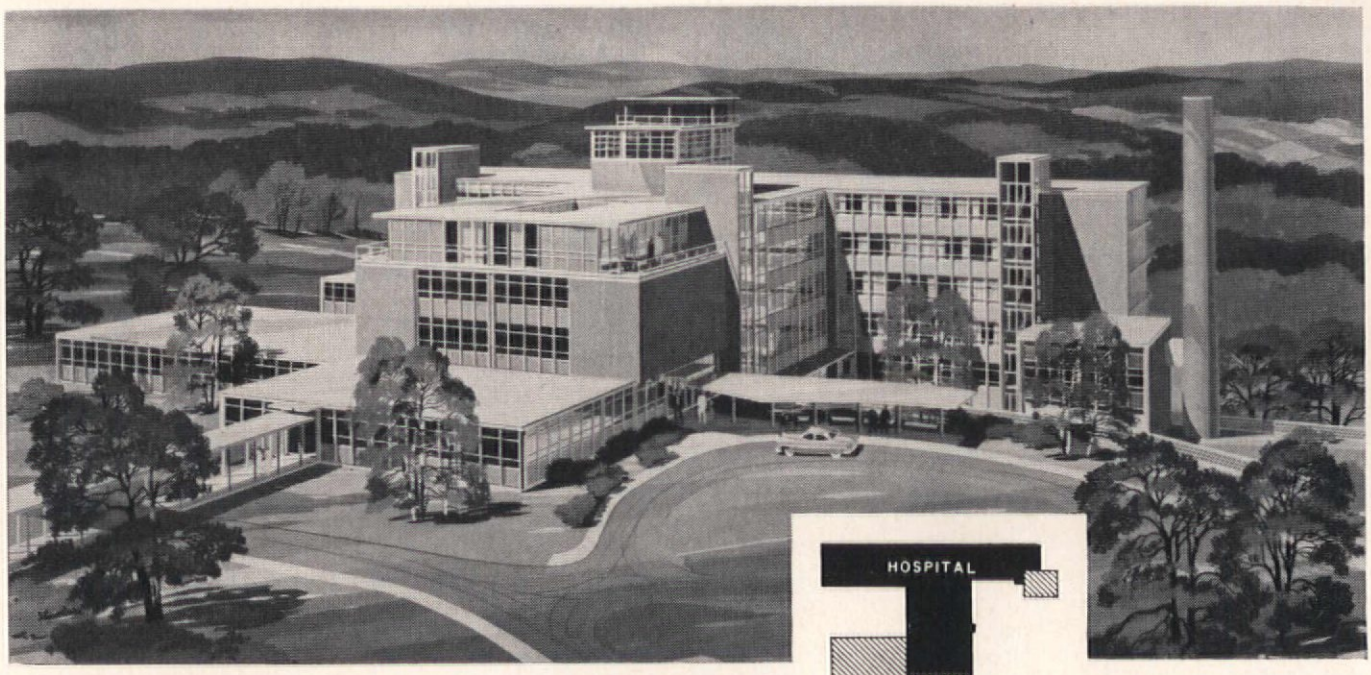
The recent report to the Appropriations Committee on civil functions and military construction couples its recommended cuts in expenditures with a request for a thorough review of the military construction program of the Defense Department with special attention to the mounting unobligated balances.

The status of appropriations (as of September 30, 1953) showed this situation:

Out of total appropriations of $9,395,739,139, a sum of $6,222,925,095 had been obligated and only $4,720,380,896 expended. The Navy came closest to using all the money Congress had given it and for that reason did not share to the extent that Army and Air Force did in the criticism voiced in the report. Navy had obligated $1,388,878,190 and spent $1,077,359,849. Its appropriations were $1,804,514,040.

Air Force, on the other hand, had been

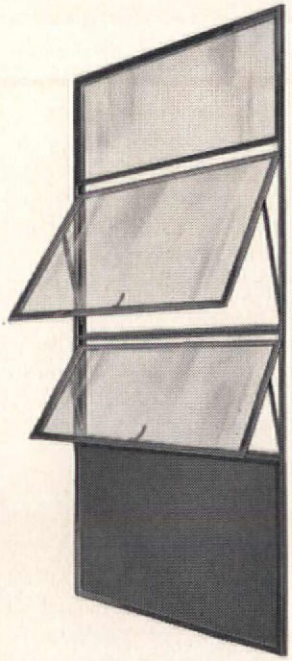
(*Continued on page 304*)



Beckley Central Hospital, Beckley, W. Va.
Memorial Hospital Association of Kentucky, Inc.
Isadore Rosenfield, architect.
J. A. Jones Construction Co., general contractor.

TRUSCON'S NEW VISION-VENT WALL

offers Mass-production Economy of Standard Steel Windows



This exciting new Truscon development opens entirely new concepts of window walls in steel and glass. Vision-Vent is a new building unit incorporating all mass-production and installation economies of standard steel windows. It is designed to cover entire wall surfaces.

Vision-Vent was developed in cooperation with architects, contractors and building owners. Initial application is a chain of ten hospitals built for the Memorial Hospital Association of Kentucky. Anticipated results of this new Truscon construction method are (1) simplicity of design, (2) weather resistance, (3) low first cost, (4) low maintenance cost.

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THE RECORD REPORTS

WASHINGTON

(*Continued from page 302*)

given $5,264,203,770 by Congress, had obligated $3,446,026,998, and spent $2,549,928,694. Army's score: $2,327,021,329 in total appropriations, $1,388,019,907 obligated and $1,093, 092, 353 spent.

The redesigning of many facilities to cut costs by removing unnecessary frills was credited with increasing the backlogs. Savings from favorable bids and adherence to austerity standards also contributed. All this the committee favored, of course. But it still held that basically the high balances represented and "revealed" an inability on the part of the Defense Department to carry out a construction program which was presented to Congress as essential to the support of the Armed Forces. This was said to be especially true in the Department of the Army and in the Air Force.

"The committee looks forward to the day," said its report, "when the Department of Defense can present a program that will justify this committee to provide funds free from many of the reviews and controls that are now necessary.

"For the present, however, we feel obligated to be very specific about the allocation of funds, and the attention of responsible officials is called to the fact that clearances herein are limited specifically to the justified line items, except as modified herein, and to them only."

The subcommittee, headed by Rep. Glenn R. Davis (R-Wis.), trimmed current Army, Navy and Air Force construction estimates mightily. This particular action, however, involved no new appropriations since the services planned to use unobligated balances from prior money. A $100,297,000 reduction in the total Armed Forces estimate of $368,989,130 was made by the House unit, leaving the total fund at $268,692,130. A Senate counterpart group made similar approvals.

The lineup on subcommittee action:

Army estimates totaled $63,868,000; the committee approved $43,181,500, a reduction of $20,686,500. Navy estimates were $87,781,130; committee action lowered these to $68,945,630, a drop of $18,835,500. Air Force had asked committee sanction for spending $217,340,000, but the committee allowed it only $156,565,000, down $60,775,000

(*Continued on page 306*)

Another important Duriron installation

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Mies van der Rohe

ASSOCIATE ARCHITECTS
Friedman, Alschuler
& Sincere, Associated

CONTRACTOR
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Duriron pipe, as well as a complete line of standard fittings are available from stock in principal cities, and are described completely in free Bulletin PF/4.

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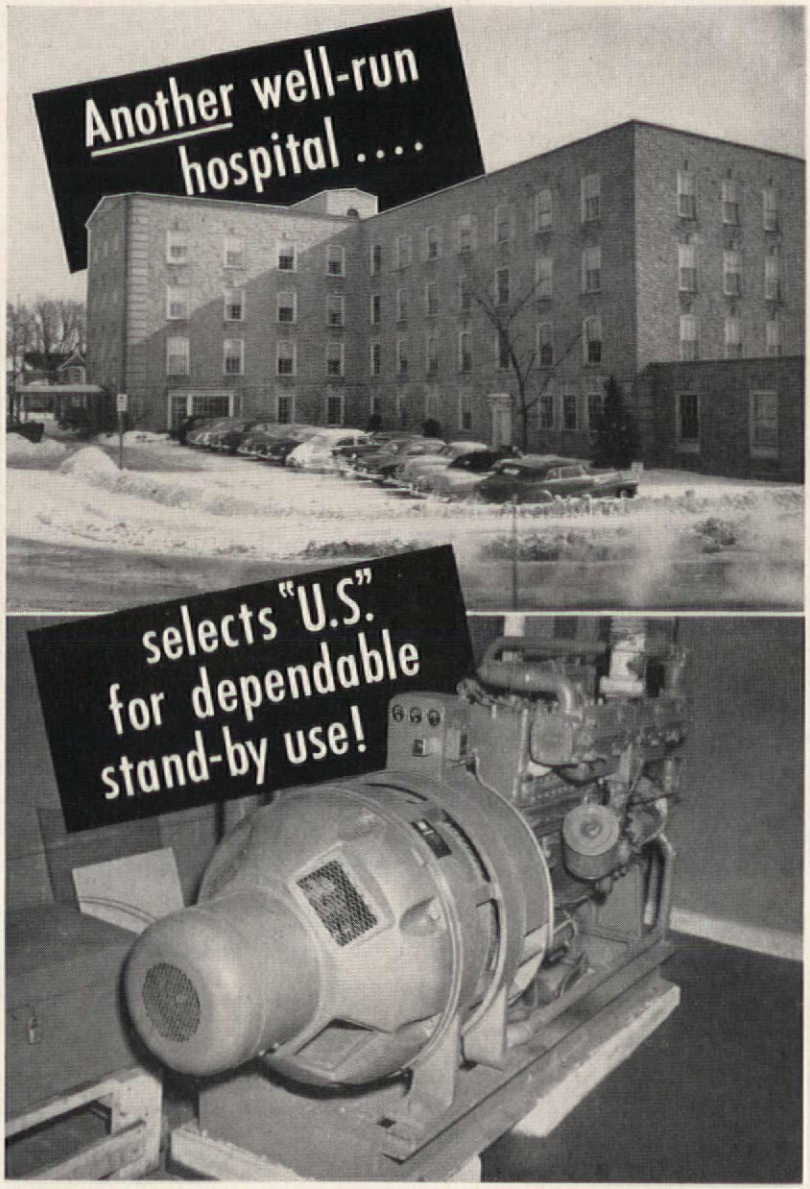

Theda Clark Memorial Hospital at Neenah, Wisconsin, has installed a 100 KW "U.S." electric plant for stand-by service. In case the regular source of power fails, the dependable "U.S." unit will start up automatically and furnish power for lights, operating room, refrigeration, heating plant, elevator—*everything!*

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THE RECORD REPORTS

WASHINGTON

(*Continued from page 304*)

ADDENDA

• Edmund R. Purves, executive director of the American Institute of Architects, has been added to the advisory committee of national housing leaders set up last May by Federal Housing Administration Commissioner Guy T. O. Hollyday. The FHA announcement said Mr. Purves' appointment reflected "the increased emphasis FHA is placing on architectural design as an essential factor" in improvement of housing standards.

• Private research organizations will conduct 90-day studies of the operation of several of the major Federal-aid-to-construction programs in five selected states for the information of the President's Commission on Intergovernmental Relations. The programs to be studied: hospital construction (surveys and plans); school construction in "Federally impacted" areas; postwar Federal highways and prior Federal-aid highway laws; annual contributions in the low-rent housing program, capital grants for slum clearance and urban redevelopment, and loans for both. Kansas, Wyoming, Michigan, Mississippi and Washington are the states selected for the studies.

• The House Armed Services Committee gave the go-ahead to construction of four bases in Spain. The committee's approval was required under the law, although funds already had been appropriated by Congress. The multi-billion dollar Spanish base program will be started with the expenditure of $49 million on the four bases which will cost approximately $200 million, Committee Chairman Dewey Short said.

• The figure for 1953 housing starts stood at 1,102,400, with the recent announcement by the Bureau of labor statistics of preliminary figures for December. The December total was 68,000, an average figure for the month. The 12-month total was the third largest number of residential starts ever recorded by BLS. It was topped only by the all-time-record year of 1950, and the 1,131,300 units started in 1952.

(*Continued on page 308*)

Owner: Leavitt Homes, Lorain, Ohio Metropolitan Housing Authority
General Contractor: Marvin Helf, Cleveland, Ohio
Architects: Garfield, Harris, Robinson & Schafer, Cleveland
Electrical Contractor: Haladey Electric Co., Lorain, Ohio

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The combination of these safety advantages, plus "Inch-Marking," the ELECTRUNITE Bending System and the ELECTRUNITE Bender, can substantially lower the cost of raceway installations. You'll find more facts in Sweet's File. Or write for Booklet SA-54.

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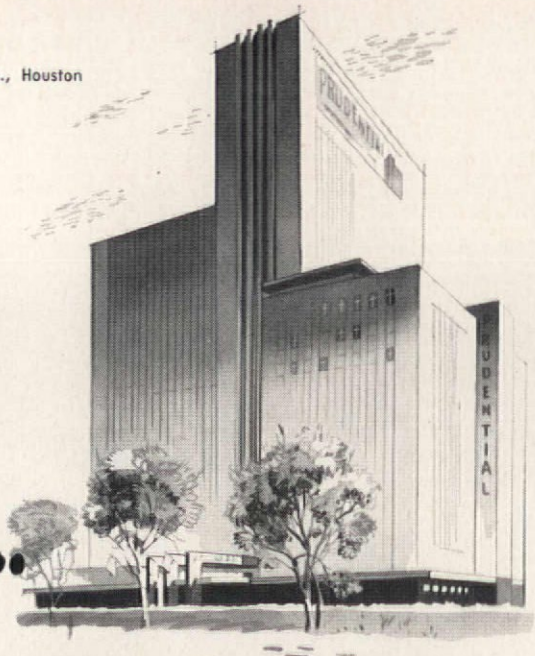
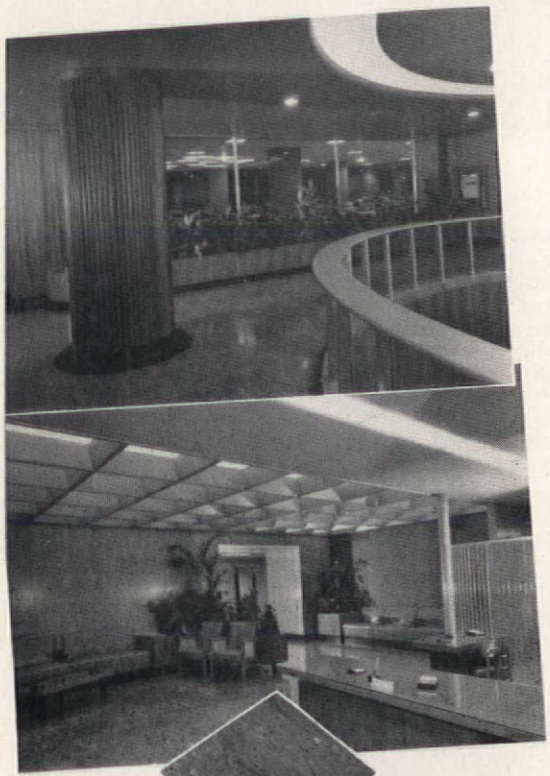
Kenneth Franzheim, Architect



Rugged Beauty...

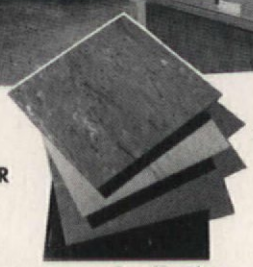
why architects specify... Wright Rubber Tile



Wright answers MORE of the architect's problems. It is the only rubber tile in the world in two degrees of hardness — soft WRIGHTEX is especially quiet and resilient—hard WRIGHTFLOR is especially dense and durable. Both products — for nearly 35 years—have been characterized by long wear, brilliant colors and easy maintenance . . . good reason why leading architects the world over continue to specify Wright Rubber Tile.

EASY-TO-MAINTAIN Wright Rubber Tile was used in heavy-traffic areas at Prudential in Houston.

QUIET, COMFORTABLE Wright Rubber Tile was used in executive offices and board rooms.



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THE RECORD REPORTS

WASHINGTON

(*Continued from page 306*)

• "Careful preliminary investigation to determine engineering and economic feasibility is required to produce well-conceived construction projects," said President Eisenhower in his budget message; and an appropriation of $15.4 million is asked for preliminary investigations of all types of construction projects contemplated.

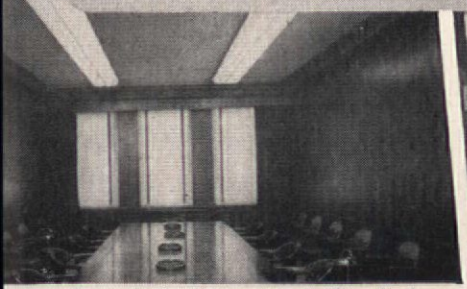
• The nation's capital is the latest test-tube of the National Association of Home Builders for determining the workability of a slum rehabilitation program. N.A.H.B.'s slum clearance expert, G. Yates Cook, has set up a pilot plan in Washington, D. C. to rid this city of what have been described as some of the worst slums in the entire country. If the plan proves successful, N.A.H.B. will use the same pattern in other communities in a nationwide fight against urban decay. N.A.H.B. gets an added advantage in the choice of Washington; members of Congress, close at hand, can be told the benefits and observe them personally as they develop.

• Maj. Gen. Samuel D. Sturgis Jr., chief of the Army Corps of Engineers, wants to see the Corps regain its former "professional standards." In his opinion this is necessary if future wars (as foreseen in military's "new look") are to be won by technology. At present, 85 per cent of the officers on active duty in the Corps are reservists and only 15 per cent are professional engineers. Maj.-Gen. Sturgis would like to see commissions given out to engineering graduates or experienced construction men. The engineering profession has been hard hit, he says: everybody is a manager, not an engineer.

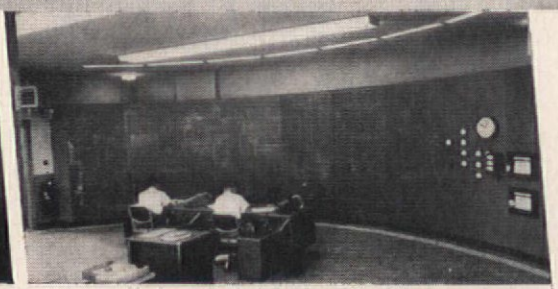
• Congress was being urged by construction industry groups to hurry action of the judicial review bill — the Senate-passed measure which would give contractors relief from a long-standing grievance. The measure seeks to correct an alleged injustice which, by Supreme Court ruling, permits a Federal contracting officer or department head to have the last word in contract disputes. No appeal from such rulings now is permitted unless fraud can be established.

(*More news on page 310*)

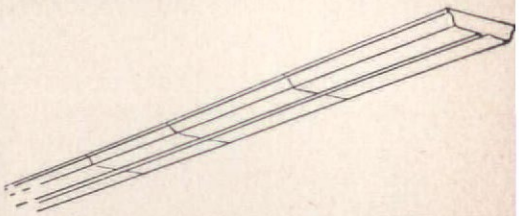
HOLOPHANE NO. 9300 Sets New Lighting Standards in a Wide Variety of Modern Interiors . . .



ector's Room, Public Utility, Atlantic City, N. J.



Marlowe Central Station, West Virginia

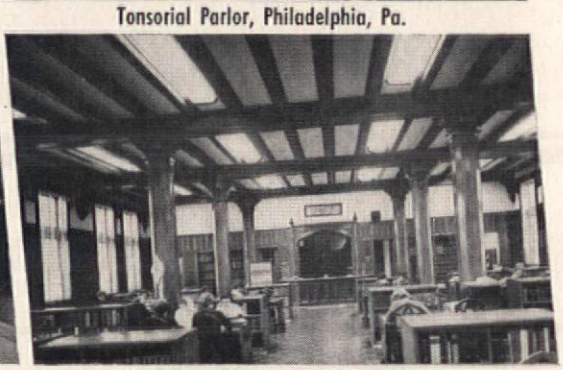


Plant Offices, Irvington, N. J.

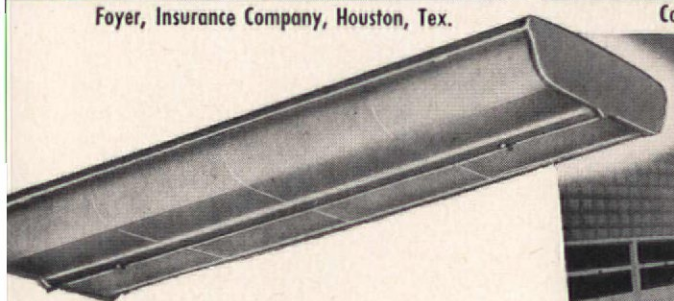
Tonsorial Parlor, Philadelphia, Pa.

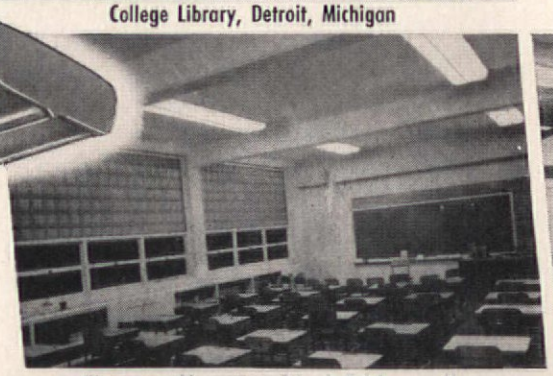
Across the country . . . wherever they have been installed . . . No. 9300 Surface-Attached HOLOFLUX* units have earned unanimous approval for their lighting superiority . . . Their shallow depth creates the modern, distinctive look of recessed units, without the cost of roughing-in. Enclosed prismatic construction assures greatest fluorescent light output with complete absence of cumulative glare, even in continuous runs . . . As the photographs herewith indicate, HOLOFLUX units are ideal for an almost unlimited range of applications. Architects and engineers are invited to consult Holophane engineers, without obligation.

Foyer, Insurance Company, Houston, Tex.

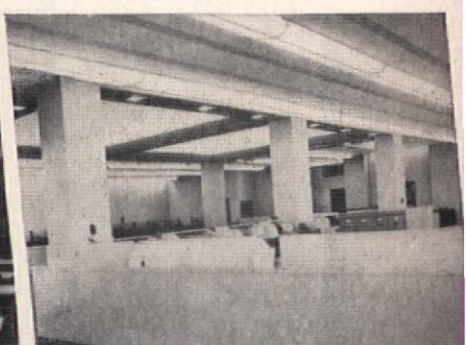


College Library, Detroit, Michigan





Classroom, Elementary School, Fairhaven, Mass.

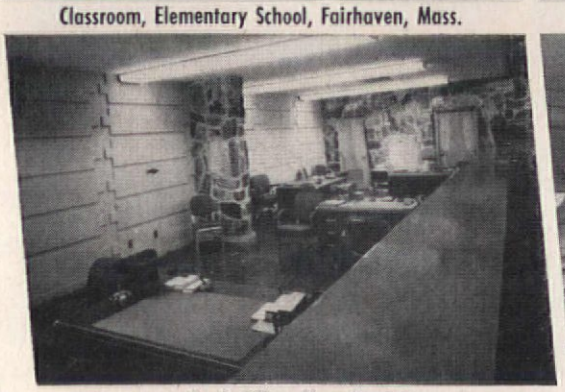


Savings & Loan Co., Anderson, Ind.

Features of HOLOFLUX Units

- Low Brightness
- High Output
- Easy Installation
- Distinguished Appearance
- Continuous Installation
- Minimum Depreciation

Write for latest Engineering Data on HOLOFLUX Units



Bank Office, Phoenix, Arizona

Automobile Showroom, Buffalo, N. Y.

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THE HOLOPHANE COMPANY, LTD., THE QUEENSWAY, TORONTO 14, ONTARIO

THE RECORD REPORTS

(*Continued from page 308*)

ON THE CALENDAR

March

1–4 Annual convention, Associated General Contractors of America — Hotel Statler, Los Angeles

2–3 Conference on Schools, sponsored by the University of Kansas in cooperation with the Kansas Chapter of the American Institute of Architects and Kansas City A.I.A. — University of Kansas

2–5 Department of Audio-Visual Instruction, National Education Association — Chicago

3–6 Spring meeting of the Board of Directors, American Institute of Architects — Washington

4–6 National Conference on Higher Education, Association for Higher Education, National Education Association — Chicago

4–6 Businessman's Conference on Urban Problems, sponsored by the U. S. Chamber of Commerce and the San Diego Chamber — San Diego

4 The work of Gio Ponti and Gyorgy Kepes in an architecture and design exhibit; until April 4 — Institute of Contemporary Art, 138 Newberry St., Boston

8–11 National Electrical Manufacturers' Association — Edgewater Beach Hotel, Chicago

10–12 Fortieth Annual Convention, Michigan Society of Architects — Hotel Statler, Detroit

10 Street Scene: an exhibition of the work of Yale students and of historical material; until May 2 — Museum of Modern Art, 11 W. 53rd St., New York City

11 Technical Development and Its Impact on Sculpture; sixth in a series of forums on "The Impact of Science and Materialism on the Arts Today" — Architectural League of New York, 115 E. 40th St., New York City

15–19 Tenth Annual Conference and Exhibition, National Association of Corrosion Engineers — Kansas City

18–21 Annual meeting of the Committee on Art Education; theme, "Art Education and the Creative Process" — Museum of Modern Art, 11 W. 53rd St., New York City

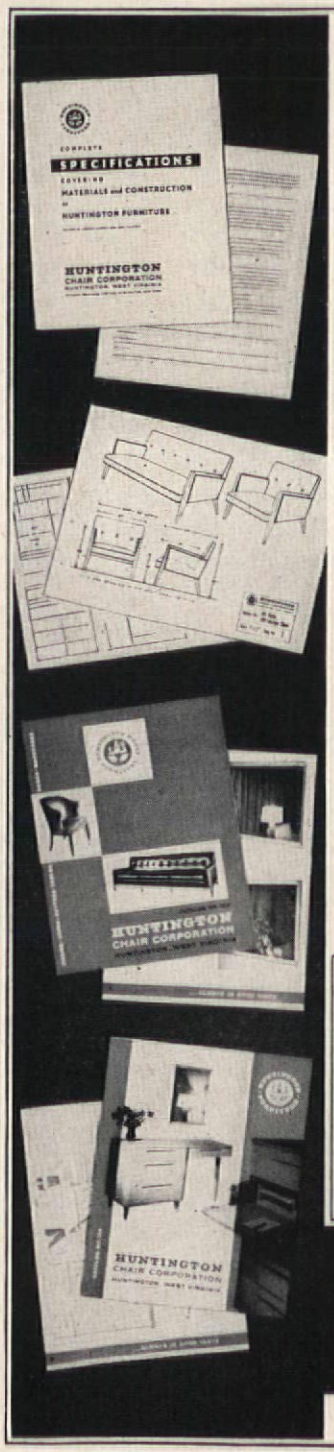
22–26 First annual Southern Homes Show, sponsored by Textile Hall Corporation — Textile Hall, Greenville, S. C.

April

1–6 Sixth Annual National Brickmason Apprentice Competition, sponsored by the Bricklayers, Masons and Plasterers International Union — Los Angeles

8 Future Directions and Changes: What Is the Expression of Our Times? last in a series of forums on "The Impact of Science and Materialism on the Arts Today" — Architectural League of New York, 115 E. 40th St., New York

(*Continued on page 312*)



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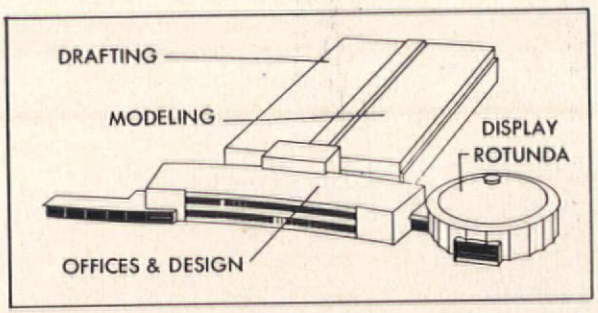
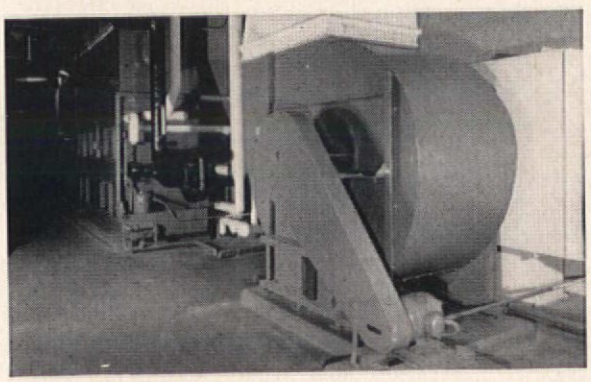
Advanced Styling Section of Ford Motor Company's new $11.5 million Styling Building, Dearborn, Michigan.

Ford "dream shop" has built-in climate!



The design-office wing and display rotunda are served by a central system. It includes: 7 supply fans; 34 exhaust fans; heating and cooling coils and sprayed-coil dehumidifiers — all furnished by American Blower.



Air for drafting rooms and modeling studios is conditioned by 24 specially built, automatically controlled American Blower Air-Conditioning Units. Each unit contains heating and cooling coils and capillary air washers.

This "dream shop" at the Ford Engineering Staff's Advanced Styling Section is just one of many styling areas which depend on clean, conditioned air.

For example, in 12 roomy studios clay-modeling teams work under lights which produce shadowless illumination — and intense heat! To absorb this heat and provide the proper climate for working with clay models, specially designed air-conditioning systems were installed for each studio and drafting room. American Blower Air Handling and Air-Conditioning Equipment was used for this unusual assignment.

The expert know-how of American Blower engineers is on tap for industry at all times. If you have an air-handling or air-conditioning problem, phone your nearest American Blower or Canadian Sirocco Branch Office.

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THE RECORD REPORTS

(*Continued from page 310*)

13–14 Sixth Annual National Engineering Conference, American Institute of Steel Construction — Hotel Schroeder, Milwaukee

15 Design in Scandinavia, an exhibition; until May 15 — Brooklyn Museum, Eastern Pkway., Brooklyn

26–28 Annual meeting, United States Chamber of Commerce — Washington

May

3–5 Annual Meeting, Air Pollution Control Association — Patten Hotel, Chattanooga, Tenn.

3–7 Semi-Annual Convention, Society of Motion Picture and Television Engineers — Washington

3–14 British Industries Fair — Olympia and Earls Court, London, and Castle Bromwich, Birmingham, England

5–7 Eighth National Meeting, Forest Products Research Society, and 1954 Woodworkers' Industry Show — Grand Rapids, Mich.

5–7 Second Welding and Allied Industry Exposition — Memorial Auditorium, Buffalo, N. Y.

5–16 1954 Annual Exhibition, Philadelphia Chapter, American Institute of Architects — Philadelphia Art Alliance, 251 S. 18th St., Philadelphia

7–8 1954 Convention, Michigan Engineering Society — Jackson, Mich.

10–14 Annual assembly, Royal Architectural Institute of Canada — Montreal

17–20 Second Basic Materials Exposition — International Amphitheater, Chicago

18–21 American Planning and Civic Association Conference — Columbus, Ohio

26–29 1954 British Architects Conference — Torquay, England. Information: C. D. Spragg, Secretary, Royal Institute of British Architects, 66 Portland Place, London W. 1, England

31 Canadian International Trade Fair; until June 11 — Exhibition Park, Toronto, Canada

Famous Builders Cannot Make Mistakes

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IRONITE Thompson Products Co. Cleveland Ohio

IRONITE Sears-Roebuck Store Houston, Texas

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OFFICE NOTES

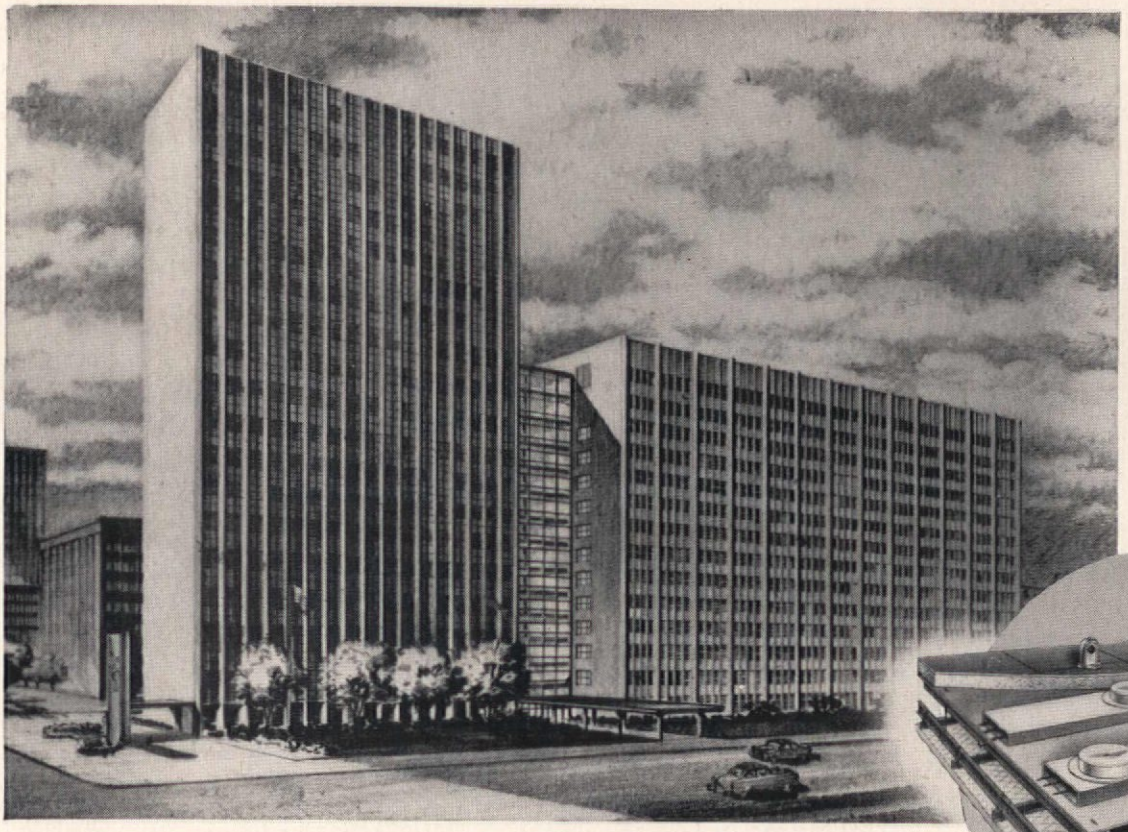
Offices Opened

• Beemer Harrell has opened an office for the practice of architecture at 566 Tenth Street Dr., N. W., Hickory, N. C.

• David J. Katz, Architect, has announced the opening of his offices at 355 Arthur St., Gary, Ind.

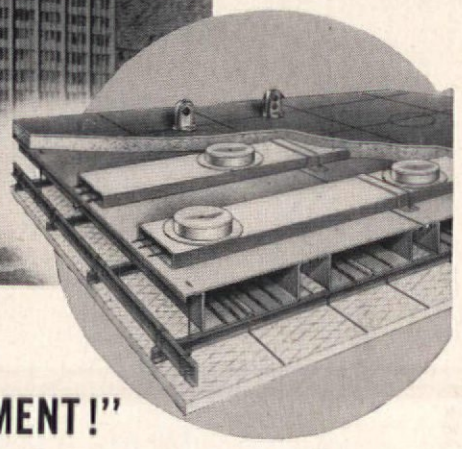
• Waisman and Ross, Architects and Consulting Engineers, have announced the opening of their new office. The firm's address is 308 Great Western Bldg., 356 Main St., Winnipeg, Manitoba, Canada.

(*Continued on page 314*)



New $26,000,000 City County Building, Detroit, Michigan. Harley, Ellington & Day, Inc., Architects and Engineers; Bryant & Detwiler Co., General Contractors.

Nepco header ducts connected to top surfaces of Fenestra structural steel panel subfloor enable all of the large-area cells to be used as electrical raceways.



The Challenge: "PROTECT THIS BUILDING INVESTMENT!"

The Answer: "AN ADVANCED ELECTRIFIED FLOOR SYSTEM!"

Here, an advanced new floor system—Fenestra-Nepco Electrifloor . . . is protecting this great new multimillion-dollar building from future electrical obsolescence—electrical outlets can be installed *any time* . . . in *any* or *every* square foot of floor space . . . for any future change in electrical needs!

It saved 1,000 tons of structural steel! The cellular steel floors with their integral wiring system, combine such great structural strength with such light weight, that both structural steel and foundation costs were slashed.

It saved 6 months' building time! As many as 7 floors went in at the same time—as soon as a few of the cellular floor panels were laid and interlocked, that part of the floor served as material storage space and a working platform.

New Fenestra-Nepco Electrifloor was developed jointly by Fenestra* (Detroit Steel Products Company) and Nepco (National Electric Products Company)—two great names in the construction field.

If *you* want to protect a building investment, write to Detroit Steel Products Company, Dept. AR-3, 2252 E. Grand Blvd., Detroit 11, Mich.

*Trademark

Fenestra Nepco Electrifloor

THE RECORD REPORTS

(*Continued from page 312*)

New Firms, Firm Changes

• K. Izumi, M.R.A.I.C., A.R.I.B.A., has formed a partnership with Gordon R. Arnott. The firm will be known as Izumi and Arnott, and will have offices at Rooms 11–12, 1818 Scarth St., Regina, Sask., Canada. Mr. Arnott was formerly with the Aluminum Company of Canada, Ltd.

• J. H. Lehman, consulting engineer, announces that he has resumed his practice following a tour of duty with the United States Navy. His offices are located at 227 S. Roberton Blvd., Beverly Hills, Cal.

• Harold E. Nefe, Architect, and Paul L. Diek have opened offices at 2120 W. Wells St., Milwaukee 3, Wis. The new partnership will be known as Nefe & Diek.

• The former firm of Painter & Weeks has taken the name of Painter, Weeks and McCarty. Offices will remain at 618 W. Church Ave., Knoxville, Tenn.

• John Lyon Reid, A.I.A., has announced the promotion to partnership of four associates: Richard S. Banwell, Architect; Burton L. Rockwell Jr., Architect; William L. Gillis, Architect; and Dr. Alexander G. Tarics, C.E. The firm, to be known as John Lyon Reid and Partners, will have offices at 1069 Market St., San Francisco 3, Cal.

• Roger O. Austin, Architect; Carl F. W. Kaelber Jr., Architect; Herbert P. Kopf, Engineer; William P. Roberts, Architect; Nicholas J. Masucci, Architect; and Edward J. Ribson, Architect, have been admitted into the firm of Waasdorp & Northrup, Architects, as members and associates of the firm. Offices are located in Rochester, N. Y.

New Addresses

Ash & Harrison, Architects, 307½ Laura, Room 212, Wichita, Kans.

Theodore W. Dominick, Architect, 1308 18th St., N.W., Washington 6, D. C.

Howard T. Fisher & Associates, 270 Park Ave., New York 17, N. Y.

Bruce E. Heiser, Architect, 251 Post St., Room 312, San Francisco, Cal.

Because of its importance, this new product announcement is being made by Mr. N. A. Gussack, President, Grant Pulley & Hardware Corporation.

"This is our latest in sliding door hardware: the Grant 7000. We think it's the finest non-custom hardware made. It works like a dream! I hope you'll write for data today."

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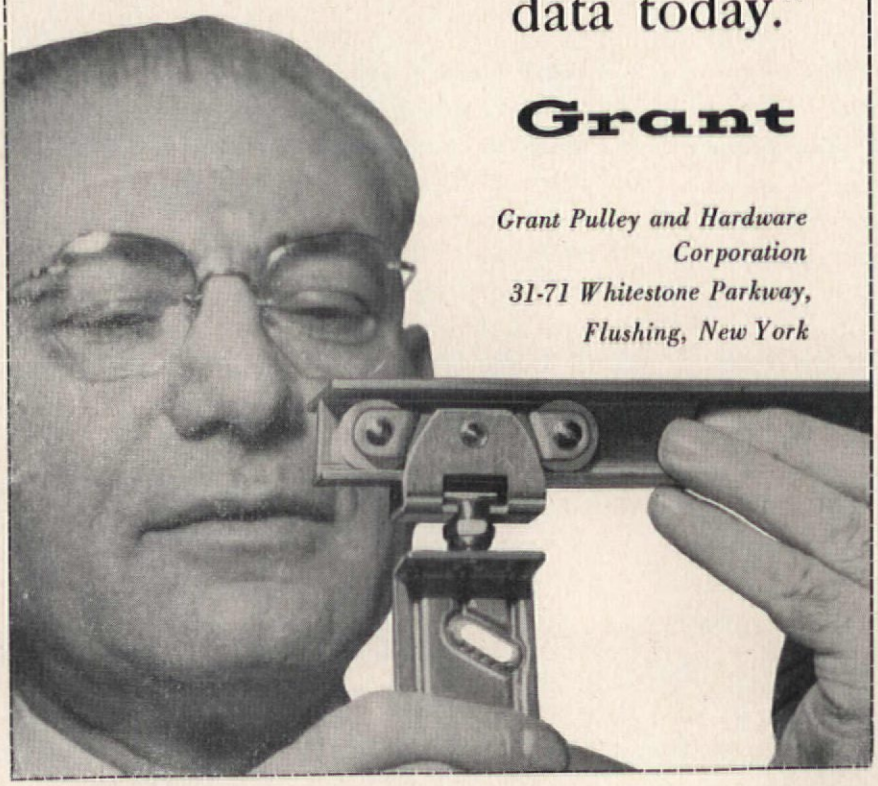
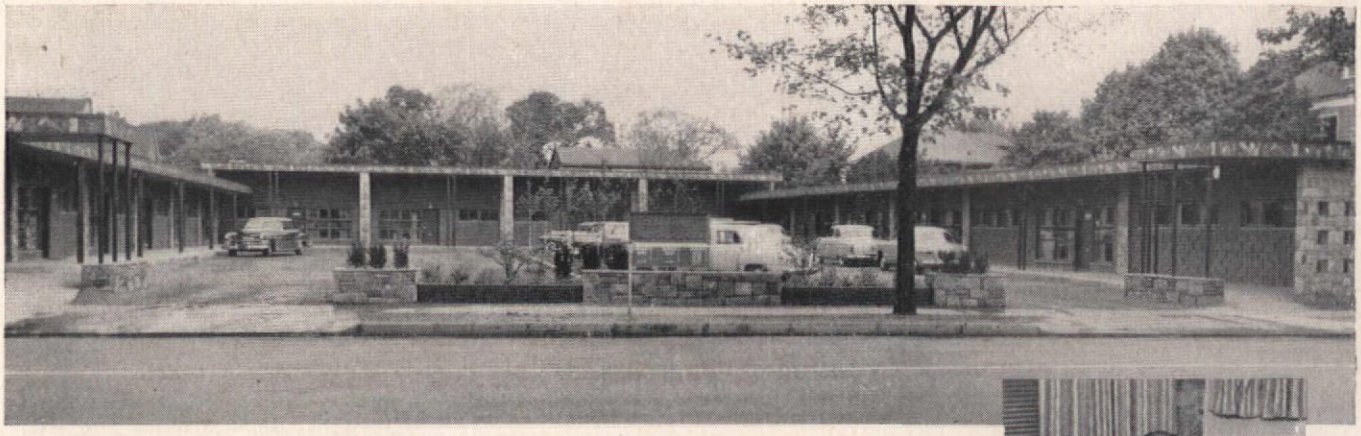


NEW GUIDE FOR CITIES ON HOUSING STANDARDS

A new guide for cities interested in developing and enforcing minimum housing standards, or revising their present codes, comes from the Housing and Home Finance Agency as another publication of its research division ("Local Development and Enforcement of Housing Codes" Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.; price, 40 cents per copy).

The guide deals primarily with the technical problems of code formulation and administration. It is not interested directly in development of civic concern for sound codes and their effective enforcement in which civic and business interests play a major role.

(*More news on page 316*)

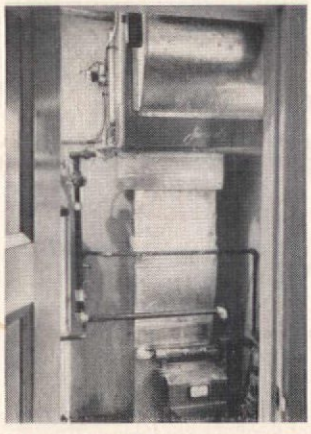


Cedarhurst Medical Center, 650 Central Ave., Cedarhurst, N.Y.

"Our new medical center with its new ideas in comfort required the best in modern heating"

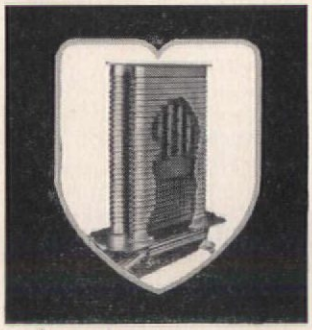
A statement by Mr. Monroe Miller, President, Central at Grove Realties, Inc., Cedarhurst, N. Y.

This functionally modern, U-shaped medical center contains 17 doctors' suites located a few steps from the 50-car, center parking court. Each suite is independent, with its own reception, laboratory, bath and utility rooms. Every tenant controls and supplies his own heat through his individual Janitrol Unit Heater.



The compact Janitrol unit, mounted overhead in the utility room leaves ample space for adding Janitrol summer cooling.

Mr. Monroe Miller, the realtor-builder, specified Janitrol Gas-Fired Unit Heaters to "meet the medical requirements for cleanliness, dependability and quiet operation." The heated air is supplied to each room through concealed ducts, with underground returns. The same ducts will carry cooled air for summer conditioning, which will be added at a future date.



Dura-tube *the armored heart that's practically indestructible!* These vital heating tubes, exclusive with Janitrol, mean longer life. Over 1/4 million have been installed without replacement for any reason!

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®Janitrol *Gas-Fired* UNIT HEATERS

DIVISION OF SURFACE COMBUSTION CORPORATION • 400 Dublin Ave., Columbus 16, Ohio

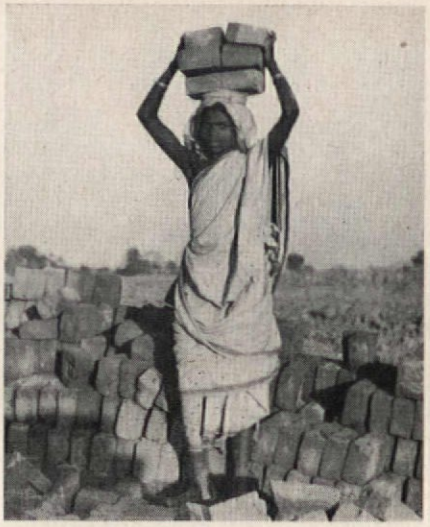
Makers of Surface Industrial Furnaces and Kathabar Humidity Conditioning.

 (*Continued from page 314*)

CONSTRUCTION IN ASIA IS SUBJECT OF I.L.O. REPORT

The International Labour Office, United Nations labor agency, last year sent Michael O'Callaghan, a civil engineer, to Asia to study labor conditions in the construction field. Mr. O'Callaghan's report sheds a vivid light on the very different problems confronting construction in Asia from those in the West.

The most obvious contrast is the almost complete lack of machinery, and the use of human beings for the hauling of heavy construction materials — rock, concrete, sand and water. Mr. O'Callaghan reports that a good part of this transportation force is made up of women and children, including girls of nine and ten years of age and women in advanced stages of pregnancy. Mr. O'Callaghan says that builders find this mode of transportation unsatisfactory — they far prefer to use donkeys for hauling, but human labor is cheaper!



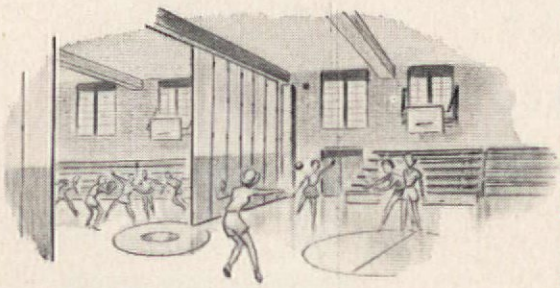
Women and young girls make up a good part of the labor force in Asia, and are often employed on construction sites to transport heavy building materials by this ancient method

Safety precautions, Mr. O'Callaghan goes on, are also a problem. Scaffolding, for example, is most often made of bamboo, which has the advantages of great flexibility and tensile strength. The framework of these scaffoldings, however, is seldom cross-braced; footboard and hand-holds are rarely provided, although most of the workers are barefoot and the loads they carry are heavy.

Housing for Workers

Each construction project, Mr. O'Callaghan points out, also presents the problem of housing its workers. Not only must the builder provide a roof for the construction worker, but often for his

(*Continued on page 318*)



Horn Folding Partitions divide a gym into separate areas—one for boys, one for girls; or one for teaching stations, one for games.

For intra-school games or practice, Horn Folding Gym Seats are out-of-the-way when folded. Extend Gym Seats and fold Partitions when events attract spectators. Roll in a Horn Folding Stage for assemblies or meetings.

It's simple arithmetic! The addition of modern Horn equipment multiplies classroom and gymnasium use. Horn Folding Partitions, Gym Seats, Stages, and Horn Classroom Wardrobes provide maximum flexibility and efficient use of floor space in schools.

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CLASSROOMS

Installing Horn equipment in your classrooms and gym adds up to flexibility plus efficiency-plus economy. Horn representatives in your area will help you determine your needs for multi-purpose Horn equipment. Write today for name of your Horn representative.

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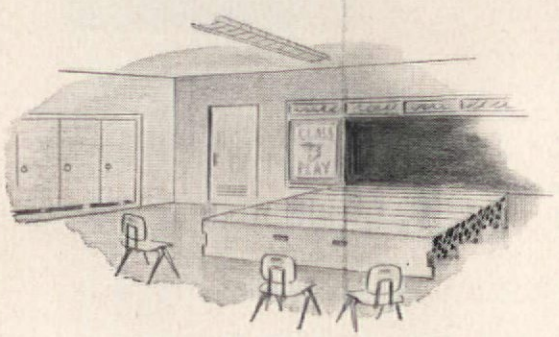

Divide classrooms with Horn Folding Partitions, too—for study and for recitation or into junior classes and senior classes. The Mobile Stage is useful in the classroom for smaller meetings, student performances, public speaking instruction.

The Horn Classroom Wardrobe provides adequate storage space for supplies and clothing, and its bulletin or chalkboard facing puts wall space to use.

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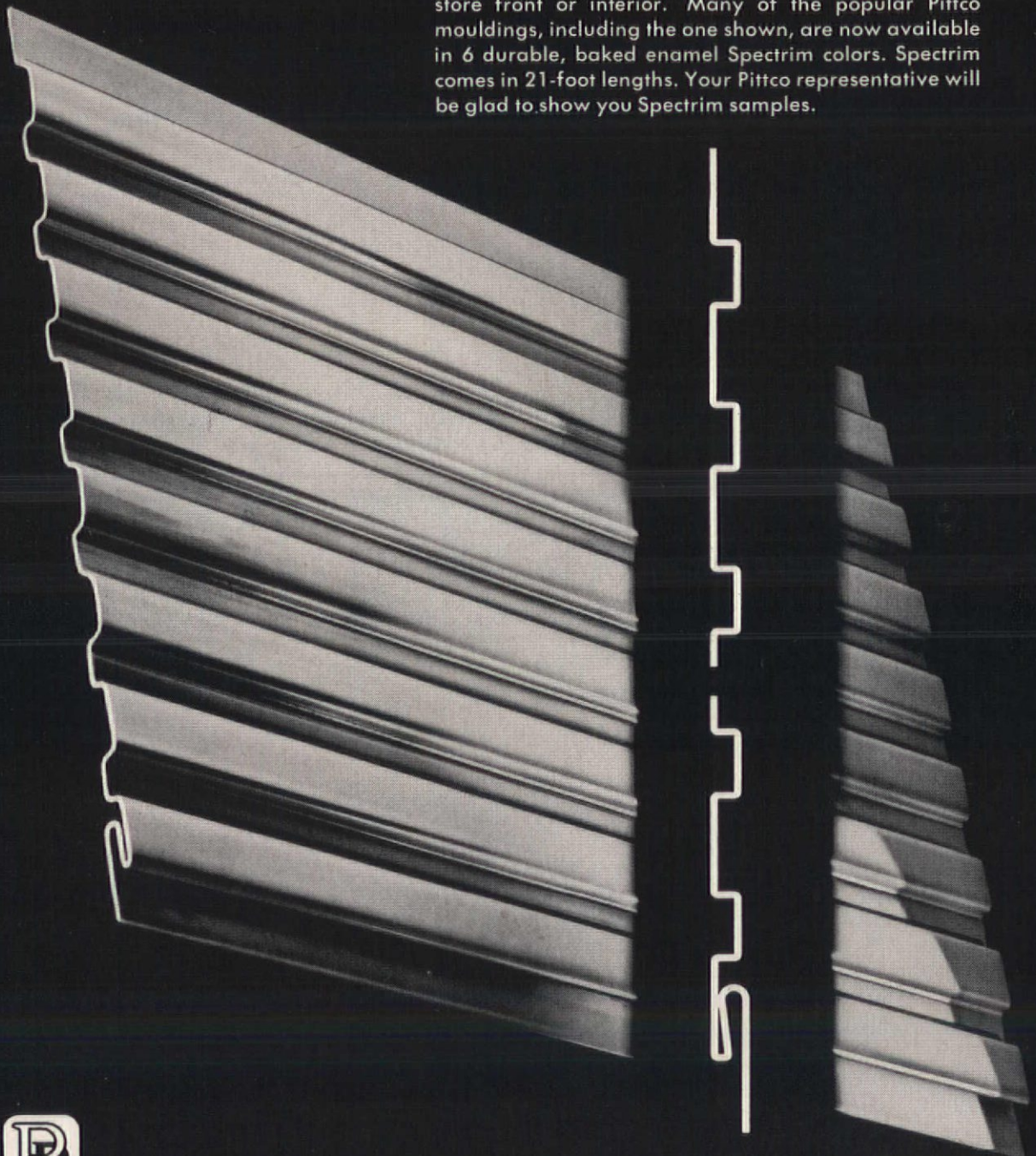
New Pittco Alumilite facing in colors

. . . adds new tone and texture to a building facade, store front or interior. Many of the popular Pittco mouldings, including the one shown, are now available in 6 durable, baked enamel Spectrim colors. Spectrim comes in 21-foot lengths. Your Pittco representative will be glad to show you Spectrim samples.



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PITTSBURGH PLATE GLASS COMPANY

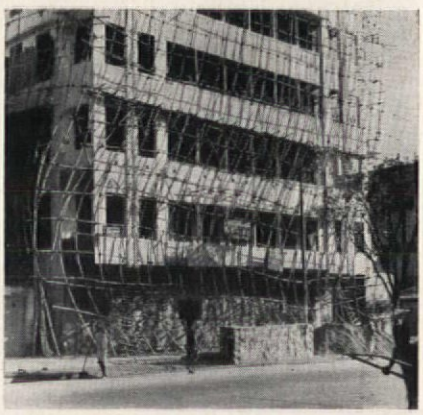
IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

(*Continued from page 316*)

entire family as well, for it is traditional in some parts of Asia for the worker to take his entire family with him to each new job. On large projects such as dam construction and irrigation projects, the number of people to be housed may go up to several thousand.

The housing provided for these workers reflects a consistent disparity between the status of skilled and unskilled workers. Skilled workers are on the whole very well housed, their bungalows equipped with electric light and washing and sanitary facilities. The only fault with their housing, Mr. O'Callaghan found, is that it is very overcrowded. He remarks, however, that this housing is equal to and in some ways superior to the housing provided for construction workers in Europe.

Scaffolding in Asia is most often made of strong and flexible bamboo, but is very seldom cross-braced. Workers must cling to the bamboo with their fingers and toes, for the scaffoldings are not usually equipped with foot-boards



Shelter for Unskilled Workers

The situation of the unskilled workers, however, is another story. Wages for unskilled laborers, Mr. O'Callaghan reports, may be as little as 14 per cent of those of skilled laborers. This is in contrast to the 80 or even 90 per cent of skilled workers' wages which unskilled workers may earn in more industrially advanced countries.

Shelter for these unskilled workers is intolerable from the European point of view, says Mr. O'Callaghan. They live in shacks which are most often made of corrugated iron sheets supported by a crude timber frame, or of reed matting supported by a bamboo frame. They usually build these shelters themselves.

Sanitation facilities are described as "generally rudimentary," with very few outdoor taps furnished for very many large families; in some cases running water may be available only at certain

(*Continued on page 320*)

New Research Building of Wyandotte Chemicals Corporation, Wyandotte, Michigan.

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detail of anchor

detail of expansion joint

THE RECORD REPORTS

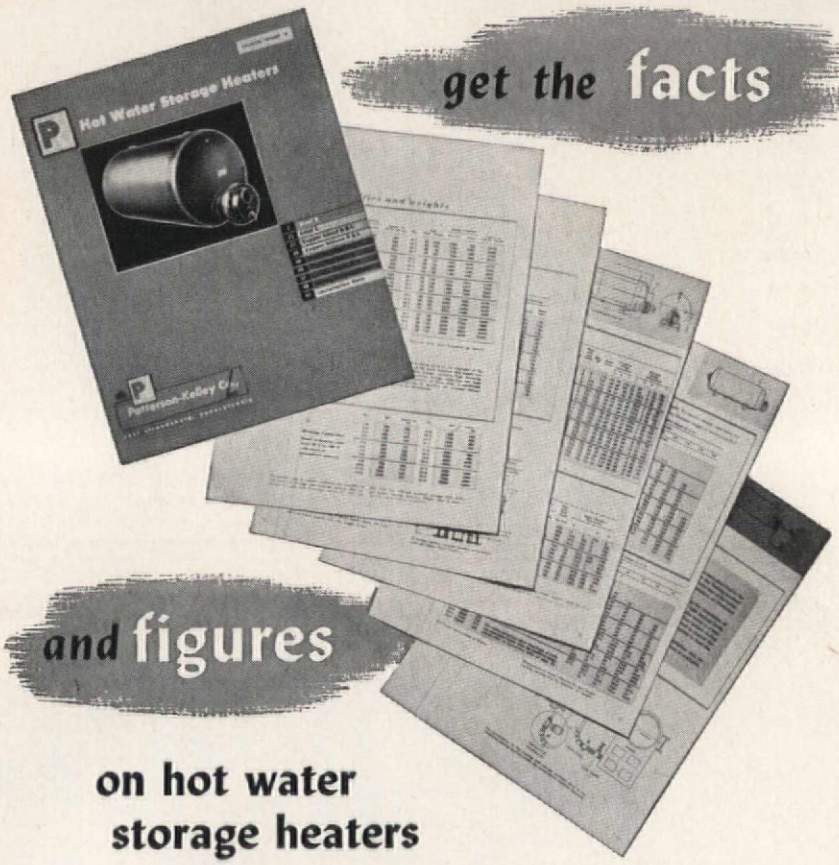
(*Continued from page 318*)

times of the day. However, Mr. O'Callaghan did find evidence of "sincere efforts" to maintain hygienic conditions.

In summing up, Mr. O'Callaghan notes that the problem of housing construction laborers is difficult in all parts of the world because of the temporary nature of such housing, but that the problem is of course aggravated in Asia by the very low standard of living.

Housing for skilled workers (above), says the I.L.O. report, is overcrowded, but otherwise satisfactory; cottages are usually supplied with electricity and water. Shelters for the unskilled workers, on the other hand, are usually shanty structures built by workers (below)

Such company-operated cottage hospitals as this one, the report stated, were not common on the sites which Mr. O'Callaghan visited on his trip



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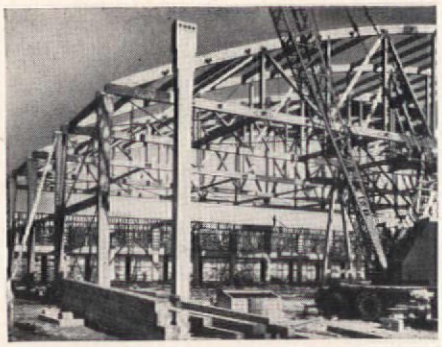
(*More news on page 322*)



Hangar of Westchester County Airport, White Plains, N.Y., is 750 feet wide and 150 feet deep, divided into three equal bays and spanned by 250-foot timber trusses of Timber Structures, Inc. Glulam timber columns are stepped out to support two adjoining trusses. Architect is Julian K. Jastremsky; consulting engineers are Tuck & Eipel; general contractors are Thompson-Starrett Co., Inc., all of New York City.

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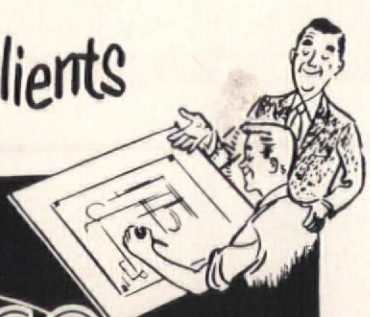

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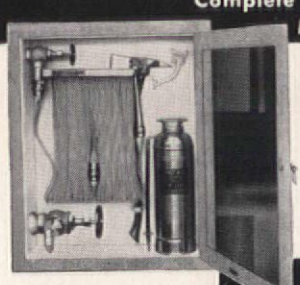

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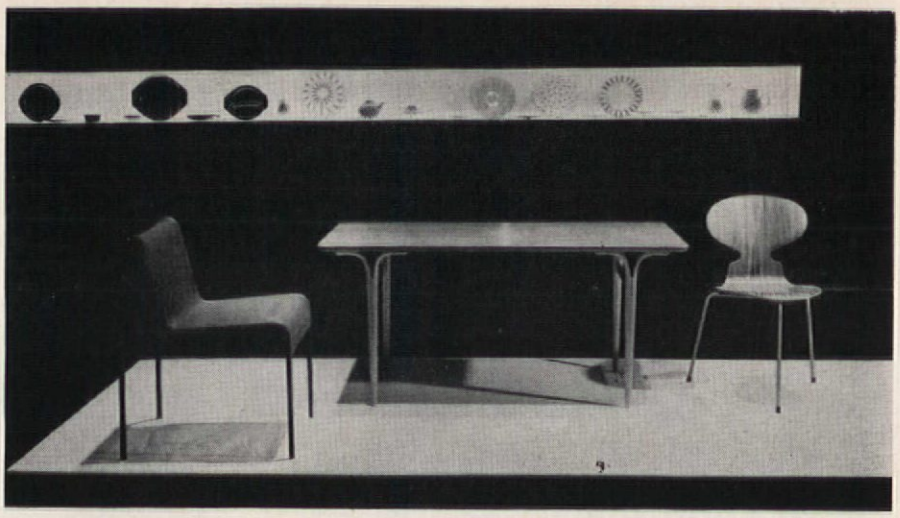
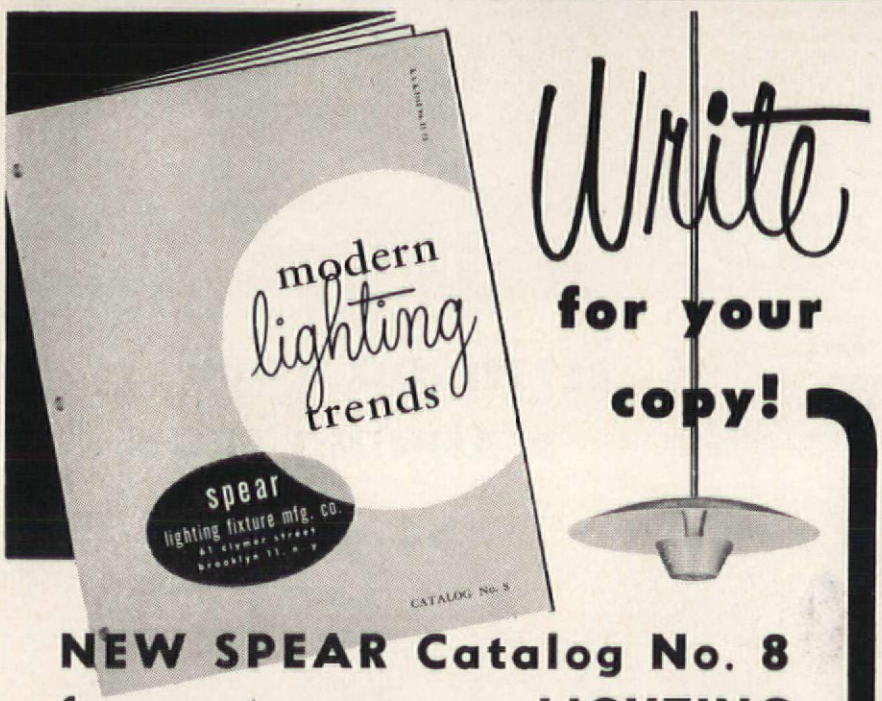
(*Continued from page 320*)



Shown at the Good Design 1954 exhibit, left to right: a dining chair designed by Harold Cohen & Davis Pratt has steel frame, spun nylon cover; a work table designed by Bruno Mathsson; another dining chair, made of walnut or beech with plastic-covered metal legs, by Arne Jacobsen



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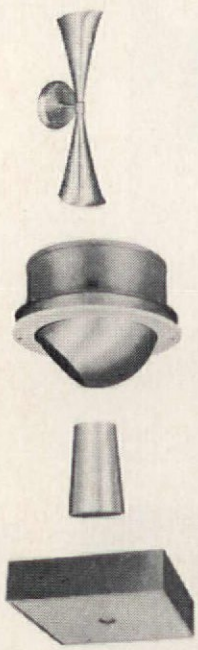

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GOOD DESIGN SHOW OPENS ONCE AGAIN IN CHICAGO

"Good Design 1954" opened in January at the Merchandise Mart in Chicago. This is the ninth of the semi-annual exhibits sponsored by the Museum of Modern Art in New York and the Merchandise Mart.

The Selection Committee, which was composed of Lazette van Houten, former Home Furnishings Editor of *Retailing Daily*, Edward Wormley, furniture designer and Edgar Kaufmann, permanent chairman of the committee, chose 350 items for the exhibit, the largest number of items ever picked for one of the Good Design shows.

The committee observed in these selections the continuation of the two

(*Continued on page 324*)

Above: stainless steel flatware by Italian architect-designer Gio Ponti. Below: the covered stoneware jar was designed by Peter H. Voulkos; chair and table were selected for June show, were designed by Katavolos, Littell & Kelley

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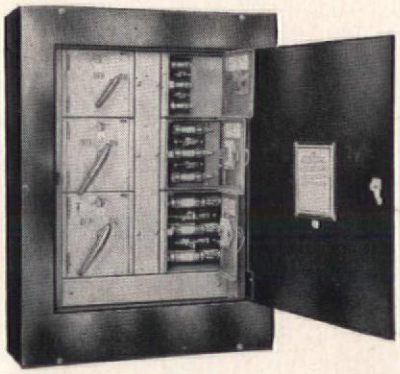

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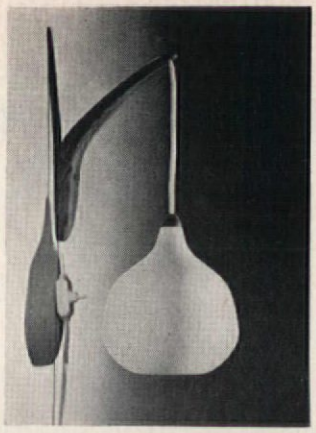
(*Continued from page 322*)

trends of "formal" and "informal" modern — formal modern being defined as having clear-cut shapes and definite colors, informal as using softer shapes and colors.

The most outstanding development shown by the January selection, said Mr. Kaufmann, was the "rationalization and experimentation newly apparent in the design of storage units." Recalling the innovations introduced in the cabinets designed by Charles Eames in 1951, Mr. Kaufmann remarked, "This season for the first time several other designers and manufacturers have taken further steps in this direction, carrying the essential concept notably nearer to the refinement and improvement which promise to make it an enduring feature of modern homes. Two of these were selected for the current additions to Good Design. It is notable and important that neither of these echo the visual character of Eames's first ventures; reminding us that the basic ideas which build the tradition of modern design are capable of rich variety and personal inflection at the hand of capable designers."

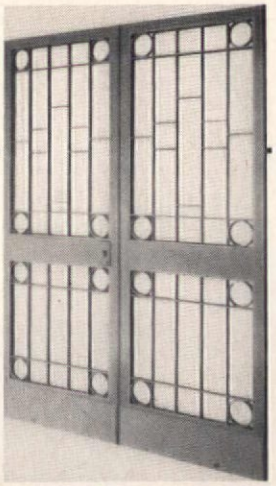


Two lamps designed by Osten Kritsiansson, above with milk glass shade, below with an oak shade. At bottom: lamp shades designed by Sesto Chiarello are of glass fiber in plastic; reversible vases and cups are by Willem Heesen

The installation design by Alexander Girard was held over from the previous exhibition.

The Museum also announced plans for the June Good Design show, which will celebrate the fifth anniversary of the show and the 25th anniversary of the founding of the Museum. This exhibition will include both a forecast of design and a résumé of designs shown in the exhibits from 1950–1954.

(*More news on page 326*)



Entrance to Psychiatric Ward, St. Vincent's Hospital, Worcester, Mass. Architects: Curtin and Riley. The above doors are shown at the factory before being packed for shipment. Note special aluminum grilles and application of special psychiatric lock.

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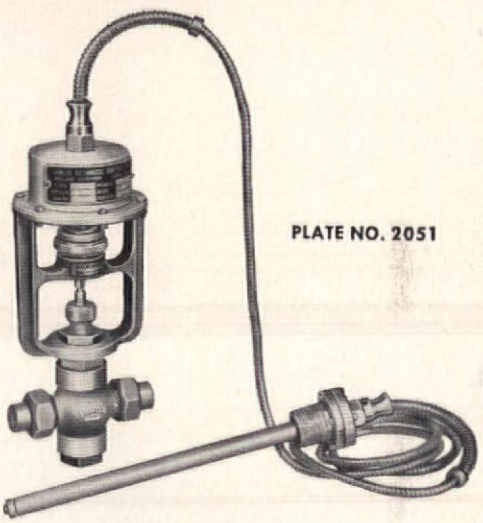

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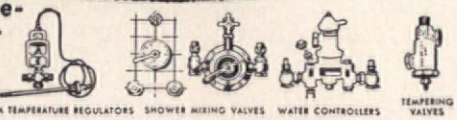

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(*Continued from page 324*)

VIRGINIA A.I.A. CHAPTER MEETS WITH ENGINEERS

The Virginia Chapter of the American Institute of Architects and the Virginia Society of Professional Engineers met in Richmond at the end of January for a three-day joint session focused most importantly on school building.

A forum on "School Needs and Construction" went into the problems created by population growth with its constantly increasing strain on public school facilities, and discussed school design and construction standards and research.

The group also heard an address by John W. McLeod of Washington, chairman of the A.I.A. School Buildings Committee. Mr. McLeod discussed research into the problem of school design and engineering.

Another session posed a familiar question: "What the Architectural Magazines Want for Publication." An architectural editor's view was presented by *Progressive Architecture's* Charles Magruder; and the Virginians were advised by Washington and Lee University Professor Dr. Marshall W. Fishwick that a tendency to the traditional approach — "the Williamsburg blight," he called it — puts them at a disadvantage with the magazines today.

John W. McLeod, Chairman of the A.I.A.'s School Buildings Committee, as he addressed the assembled members of the Virginia Chapter

Members of the school panel were Louis A. Oliver, Norfolk architect; Dr. N. E. Niles, associate chief of the School Housing Section, U. S. Office of Education; Charles A. Pearson Jr., chapter member and moderator; Richard P. Hankins, Richmond engineer; and Arthur E. Chapman, supervisor of school building, Virginia State Department of Education

Virginia Chapter's officers, from left to right: Carl M. Lindner Jr., secretary; Charles C. Justice, retiring president; Paul D. Woodward, president; Henry B. Boynton, vice president; and Herbert L. Smith III, treasurer

(*More news on page 328*)

Before recognition, before thinking,
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with its own needs, preferences,
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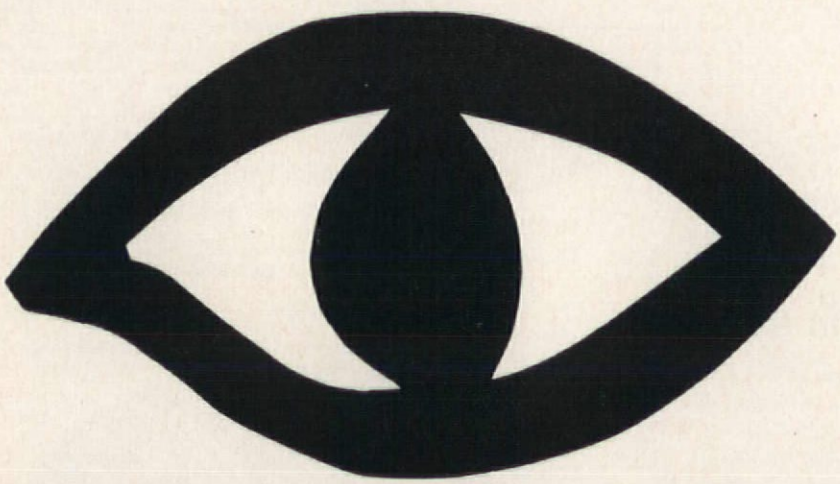

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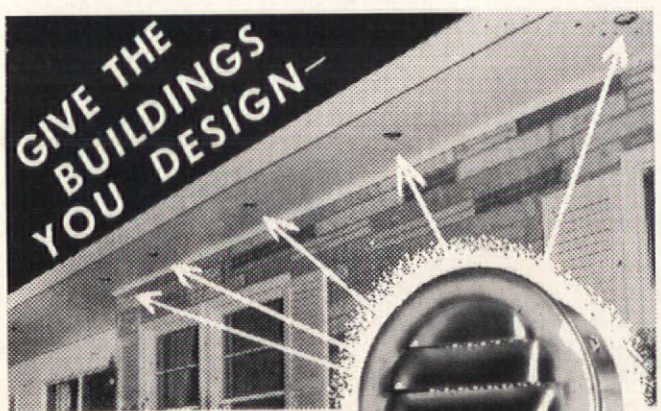

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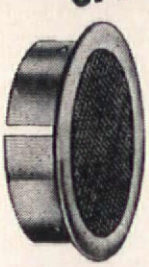

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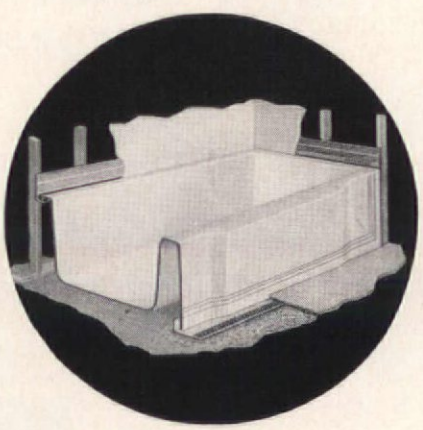

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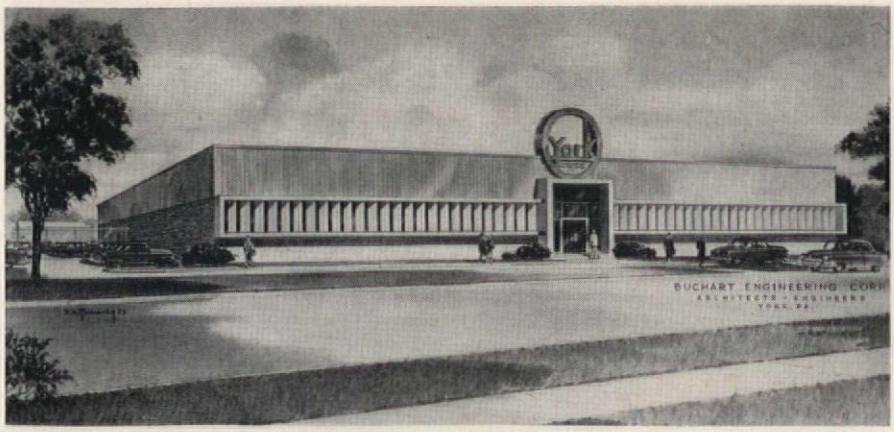
THE RECORD REPORTS

(*Continued from page 326*)

YORK BUILDS LAB FOR NEW PRODUCT RESEARCH

A new research and engineering laboratory to concentrate on packaged air conditioning, refrigeration and ice makers is being constructed by York Corporation on its Grantley site in York, Pa. Buchart Engineering Corporation are the architects and engineers; York's own Engineering Division will design and install the internal facilities.



Research and engineering laboratory will have exteriors of aluminum and brick, provide facilities for York's research in packaged air conditioning, refrigeration and ice makers

Testing Facilities Included

The new building, to cost about $900,000, including equipment, will be 150 ft wide and 240 ft long, with exteriors of aluminum and brick. There will be separate research studios for conducting many different projects simultaneously and offices, with modern drafting facilities, for the engineering staff. A major feature will be a completely-tooled shop for production of models of new developments as they emerge — to facilitate laboratory or field tests on new designs at a very early stage.

The present engineering laboratory at the West York plant will be retained for developing the larger refrigeration and air conditioning equipment.

Research Houses Planned

Also in connection with its research program, York is constructing two new residences to be used for testing its recently-developed year-round residential heating and air conditioning system. Cost of the houses, including equipment, was expected to be something over $75,000. The houses, located in the Strathcona Hills section of York, will contain no unusual features except for complete year-round air conditioning — the idea being to test two different residential air conditioning systems under conditions typical in a medium-priced house. Occupants of the houses will aid in the tests.

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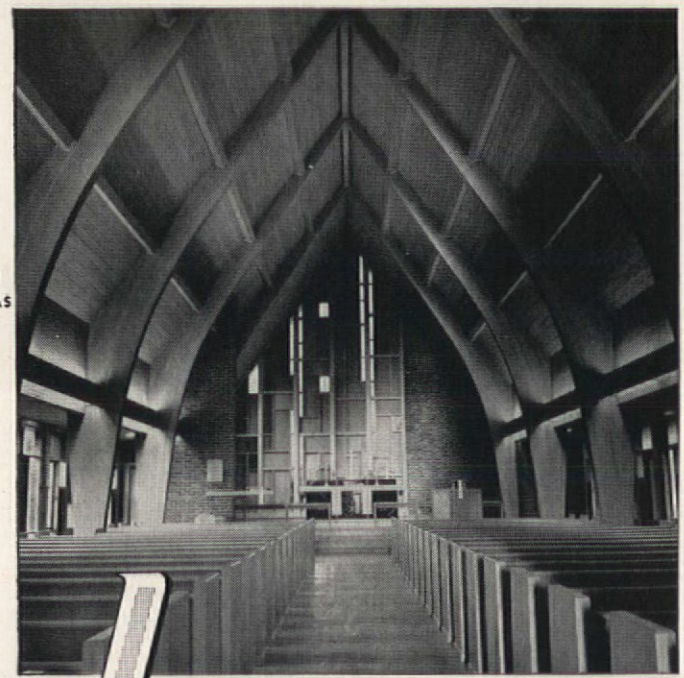

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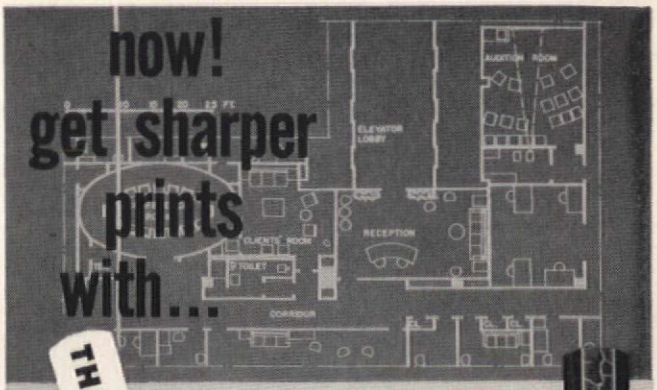

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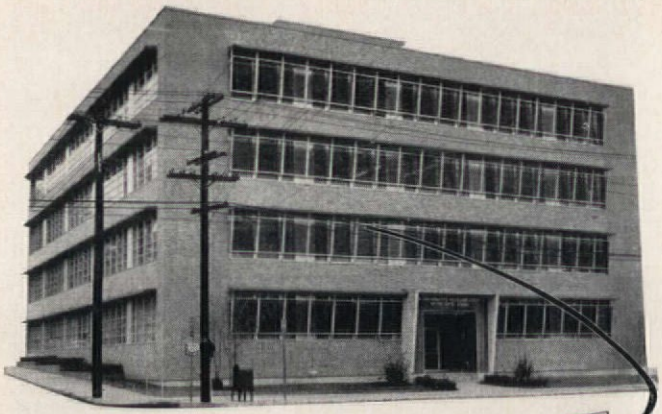

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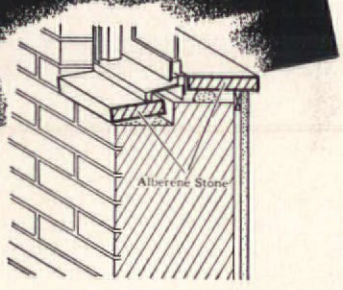

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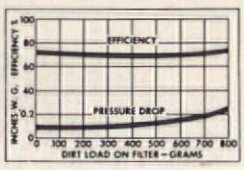

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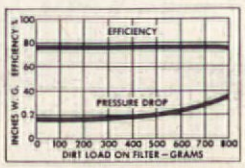

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REQUIRED READING

(*Continued from page 48*)

tion: it would have been preferable if Frank Lloyd Wright's name could have been given correctly. He is generally, though not always, referred to as Lloyd Wright (his son) throughout the book, especially in the chronological appendix and on the dust jacket. Non-de-plume for nom-de-plume, on page 171, is distressing, though hardly so important an error). One fact which Americans should ponder is the obvious importance for American culture of the innumerable clients who were willing to employ Wright and his contemporaries of the Second Chicago School during the early twentieth century, because Mr. Howarth quite convincingly attributes Mackintosh's too early decline to his lack of adequate patronage and to the personal frustration and melancholia which this entailed.

While Mackintosh cannot be said to emerge from Mr. Howarth's sincere effort as a more central personality in the development of modern architecture than was previously believed, it is still welcome to have this book devoted to him. From its fine illustrations and from Mr. Howarth's meticulous descriptions, the primary forms of the architect's design unforgettably appear in all their important contradictions: the mightily expressionist masses of a baronial past, the groping, searching tendrils of *Art Nouveau*.

ART IN THE ICE AGE

Art in the Ice Age. By Maringer and Bandi, Frederick A. Praeger, Inc. (New York, N. Y.) 1953. 12½ by 9½ in., illus. $12.50

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(*Continued on page 336*)

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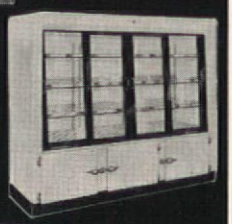

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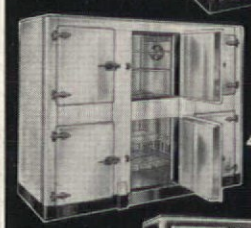

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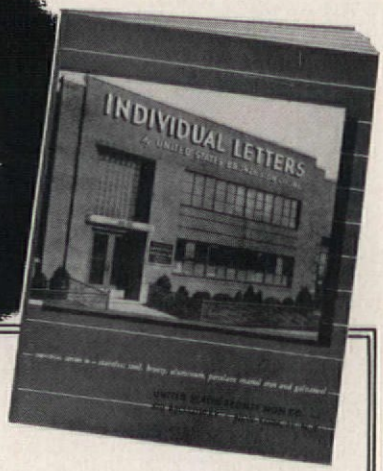

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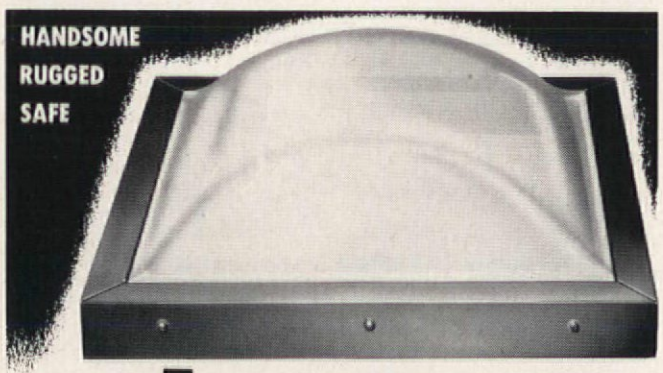

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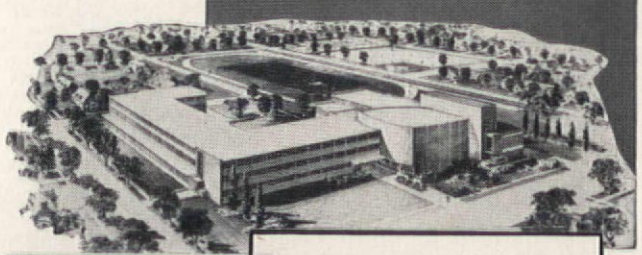

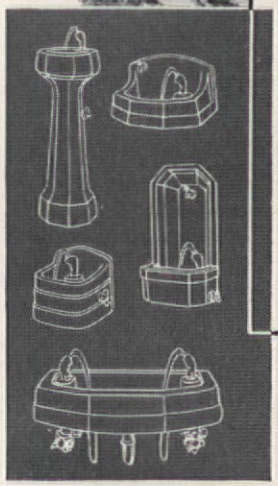

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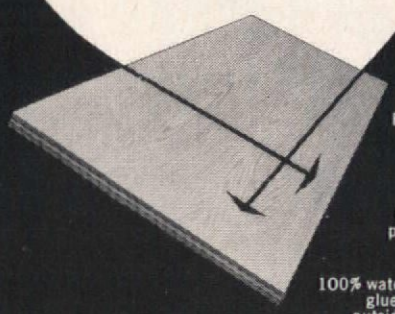

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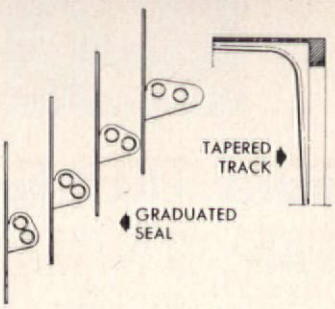

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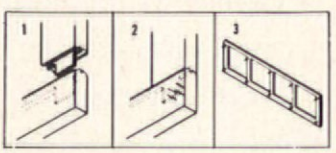

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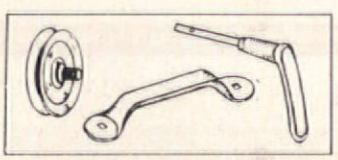

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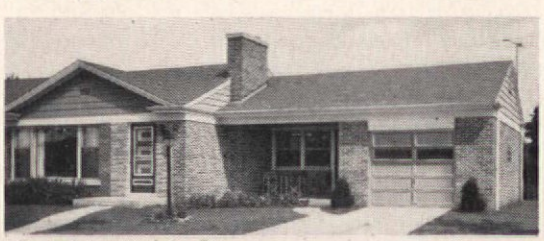

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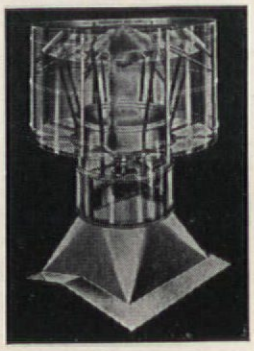

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REQUIRED READING

(*Continued from page 332*)

excavating in Grotte de Chaffaud near Vienne. His discovery caused great excitement among archaeologists and incited new excavations in France, Germany, Spain, Scandinavia and Northern Russia. The objects exciting artistically as well as historically are well presented in this book which describes the habitat and environment of the Ice-Age artist, as well as the subject matter, the techniques and the state of preservation of the art work. The text is profusely illustrated with colored plates and black and white drawings (which, perhaps, illustrate the spirit of this art better than the color plates) and a map of the sites. — M. B.

THE ART OF DISPLAY

Display. By George Nelson. Interiors Library No. 3. Whitney Publications, Inc. (18 E. 50 St. New York, N. Y.) 1953. 9¼ by 12¼ in. 190 pp, illus. $12.50

A new Book, *Display* edited by George Nelson has been added to the Interiors Library. The word "display," as explained in the introduction by Mr. Nelson, is derived from a Latin root meaning to unfold or spread out and this is exactly what this book does. It spreads out before the eyes of the reader, be he designer or layman, some of the most exciting aspects of the design world.

There is a looseness and ease which characterizes the make-up of the book and in the writing of both the introduction and the captions. With clarity design, or display, is given a broader meaning than usual and includes such categories as showrooms, exhibitions and shop design as well as window displays — virtually every three dimensional design activity in which the main purpose is to show something.

Since the very idea of display is permeated with a set time element the designer does not feel the necessity for creating for eternity and the coming generations but only for himself, his generation and most likely for the limited time of a few weeks. This release from the judgement of posterity gives him an opportunity to relax and enjoy himself, which has much to do with the freshness and gaiety associated with this work. However, it has happened. Take the case of the Eiffel Tower — designed for a summer's exposition — it was kept as the symbol of a city.

This is a research book of value and charm to the designer who will find pleasure in reviewing its contents, and

(*Continued on page 338*)

TILES by SPARTA

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These unglazed ceramic tiles are fired at high temperature, assuring ruggedness, impermeability, slip-resistance, and a high degree of vitrification. Available in sizes 1x1, 2x1, 2x2, ¼" thick in the following wide range of colors: Golden Pheasant, Ember Glow, Light Grey, Dark Grey, Brown, Red, Light Green, Dark Green, Spartan Blue, Ivory and Black. The following Mosette colors are supplied in sizes 2x1 and 1x1 only: Pearl Grey, Cream, Pink, Canary and Dresden Blue.

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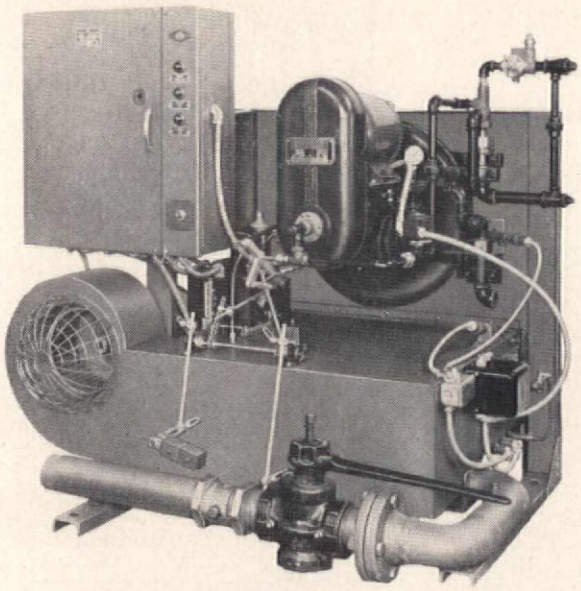

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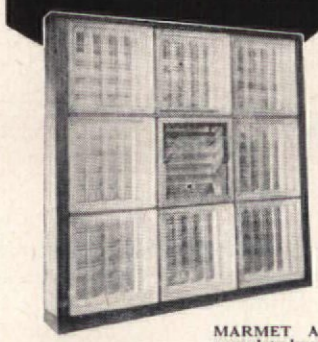

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REQUIRED READING

(Continued from page 336)

a source of surprise and delight to the layman who never dreamed that daily life was so tied up with the mores and dictates of the traditional way of doing things.

The book includes 300 photographs, well displayed and well printed and diagrammatic drawings in black and white and color which clarify the various display techniques. It contains the work of over 125 designers and architects of international note.

CHINESE ART

A Short History of Chinese Art. By Hugo Munsterberg. Philosophical Library (New York, N. Y.) 1953. 5½ by 8¾ in. 227 pp., illus. $3.50

As the title indicates, this is a brief, though not slapdash, survey of the great body of Chinese art from the prehistoric Yang Shao period through the last days of the Ching dynasty. Each era is described in terms of its historical and cultural background, its works from the point of view of both techniques and aesthetics. In spite of the author's careful scholarship, however, a clear understanding of the text is hampered by sadly inadequate illustration. — G. M. A.

FROM EGYPT TO EAMES

World Furniture Treasures. By Lester Margon. Reinhold Publishing Corp. (New York, N. Y.) 1954. 8½ by 10½ in., 186 pp., illus. $7.50

The author, director of the Interior Design Shop, N. Y., contends that good fu niture design fulfills utilitarian demarnds, affords aesthetic pleasure and expresses the taste, culture and milieu of the time. This book illustrates how the construction and design of furniture as far back as ancient Egyptian chairs were so good that their basic patterns survive today in a variety of forms.

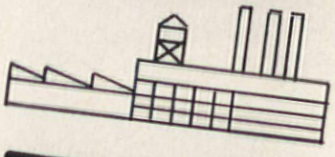
Planning Guide for Radiologic Installation. By Wendell G. Scott, M.D. Yearbook Publishers, Inc. (200 E. Illinois St., Chicago) 1953. 10¼ by 7¼ in. 336 pp., illus. $8.00

This volume should be of particular interest to architects engaged in the design of medical buildings as well as all hospital consultants. It contains the results of more than a year of preparation by committees of the American Society of Radiologists and the various chapters have been written by men chosen for their particular knowledge in the field.

(Continued on page 342)

FOR THIS

OR THIS



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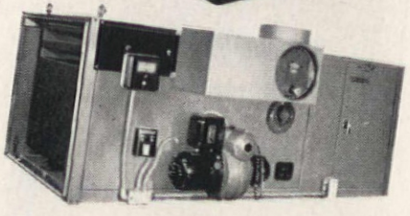

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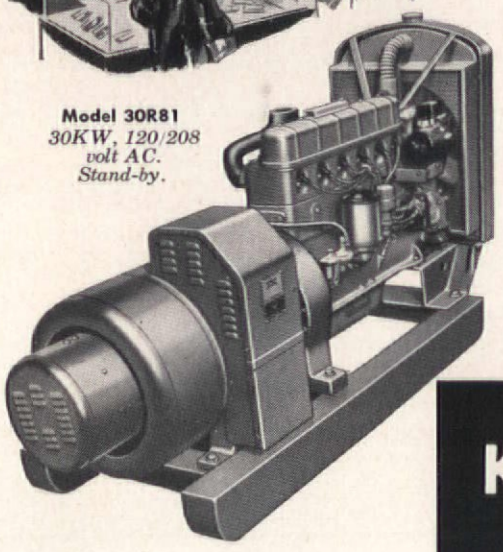

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Structural Engineer, R. J. Valentine.
General Contractors, Barringer & Botke.
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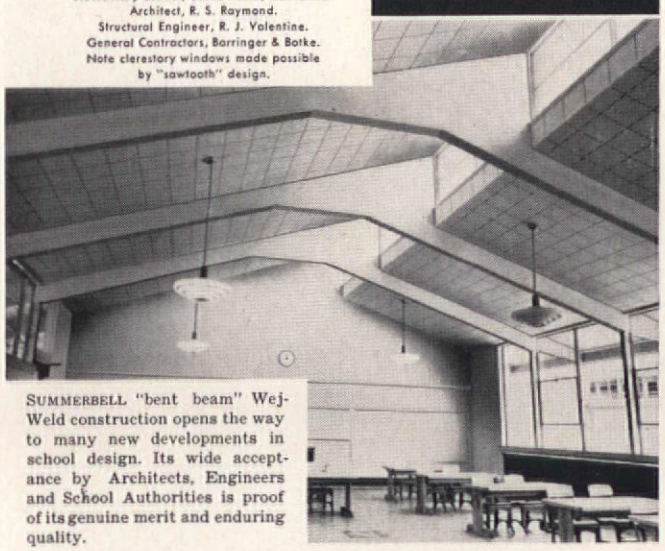

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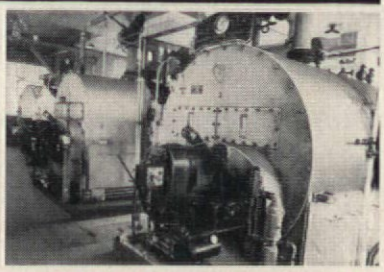

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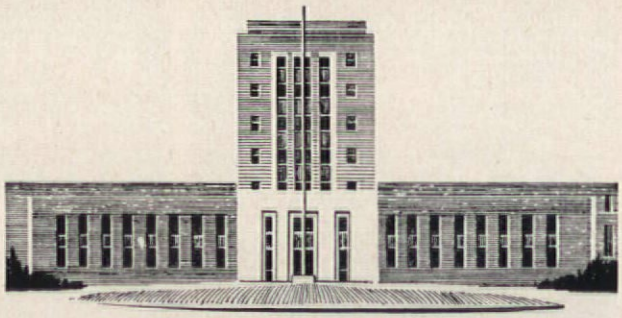

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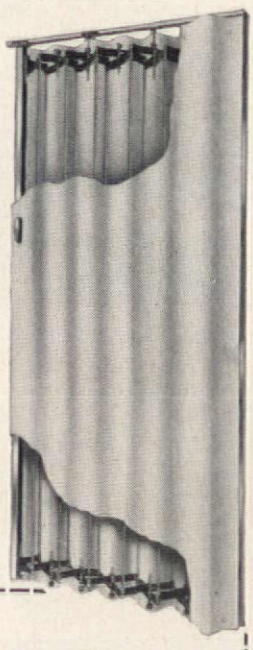

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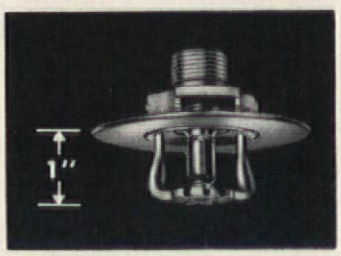

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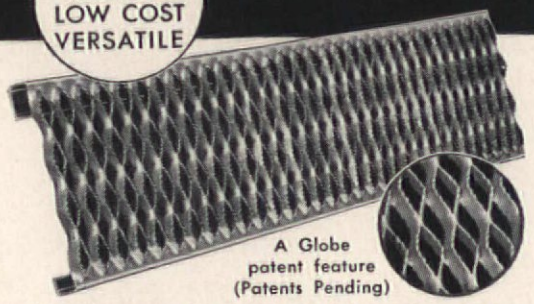

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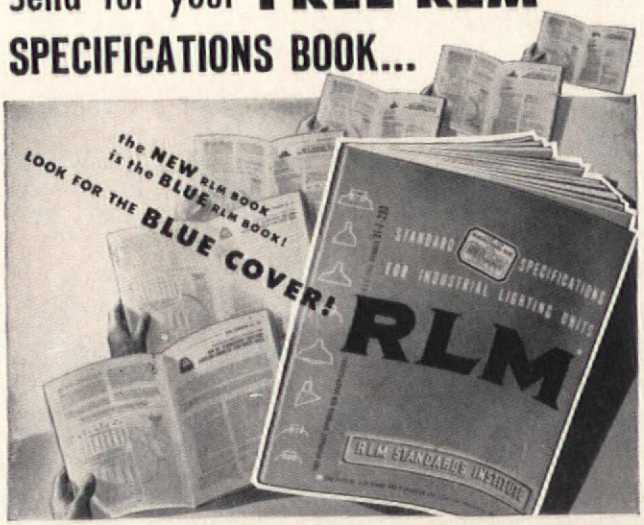

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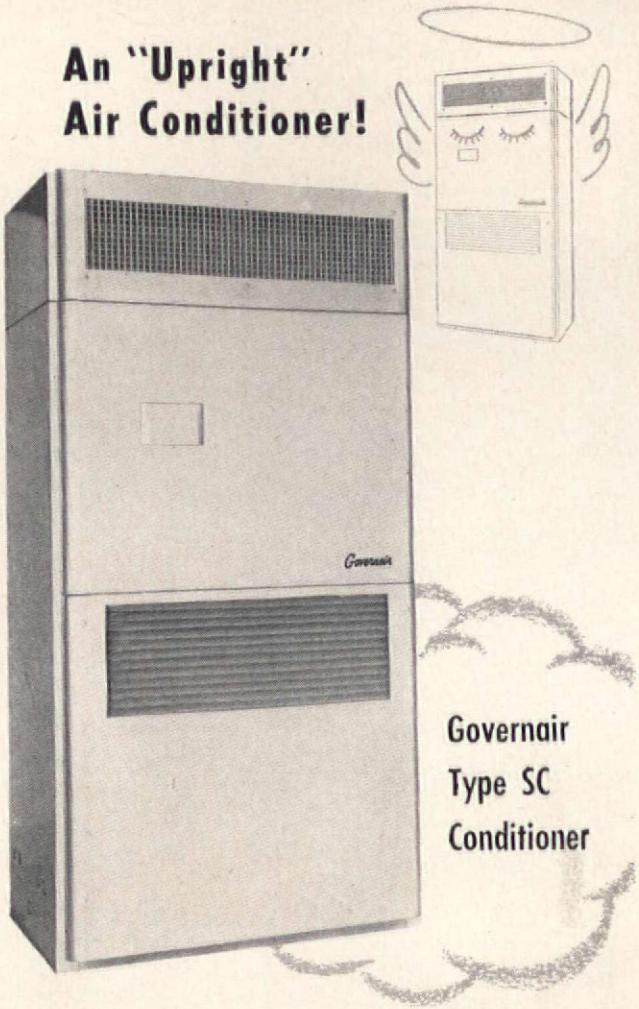

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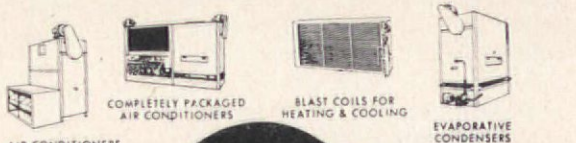

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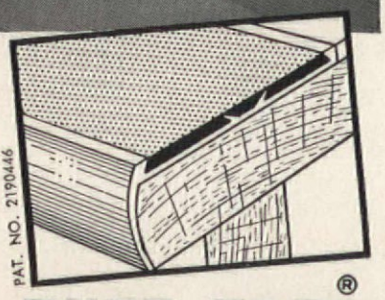

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REQUIRED READING

(*Continued from page 338*)

The chapters are for the most part devoted to descriptions of procedure, the equipment needed and the functioning of the areas discussed. A thorough description of the needs of the x-ray office or department were presented rather than merely the sort of plans that manufacturers of x-ray equipment distribute. Included are the types of rooms needed for fluoroscopy and photo fluorographic installations together with descriptions of equipment for operating rooms and special diagnostic examinations, film storage areas, illuminators, darkroom facilities, dental installations and dressing room arrangements.

HOME BUILDERS EDIT BOOK

Housing U. S. A. By NAHB. Simmons-Boardman Corp. (New York, N. Y.) 1954. Illus. $5.00

This is a comprehensive collection of articles edited and correlated by a 14-man editorial group composed of American builders and housing experts, all past presidents of NAHB. In non-technical language it tells of the emergence of housing as a modern industry and the concurrent development of today's home builder. Subjects treated include mortgage credit, the U. S. housing inventory and production capacity, builder research, public relations and merchandising programs, urban redevelopment and the slum problems. Also covered are the federal housing agencies and the government's role in housing, cooperative and low cost housing, public housing programs, building codes, housing and manpower in national emergencies, inflation, taxes, and housing in Europe.

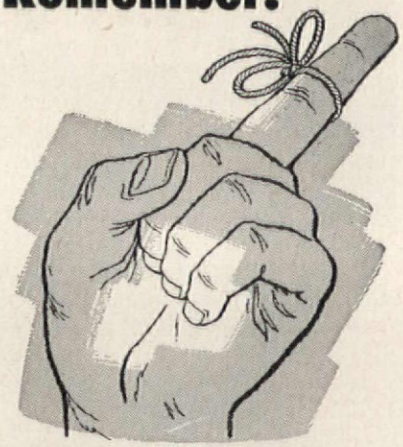
YEAR BOOK–5

Architect's Year Book 5. By Elek Books Ltd. (London, England) 1953. 10 by 7½ in. 294 pp., illus.

The aim of the editors of the Architect's Year Book is to present current thought on the philosophy and practice in the art and techniques of modern architecture as well as studies of the past, using it as a source of fundamental precepts. The fifth volume contains articles on the Bauhaus idea, space painting in architecture, systems in proportion. Walter Gropius and Frank Lloyd Wright

Also included are developments abroad; town planning including the Chandigarh, India, Capital city project; technical articles on artificial lighting, precast concrete, prestressed concrete, bellrock panels and modern wood windows.

Remember!



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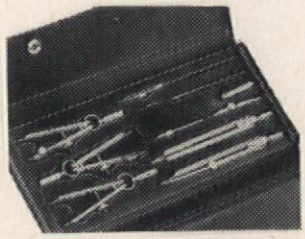

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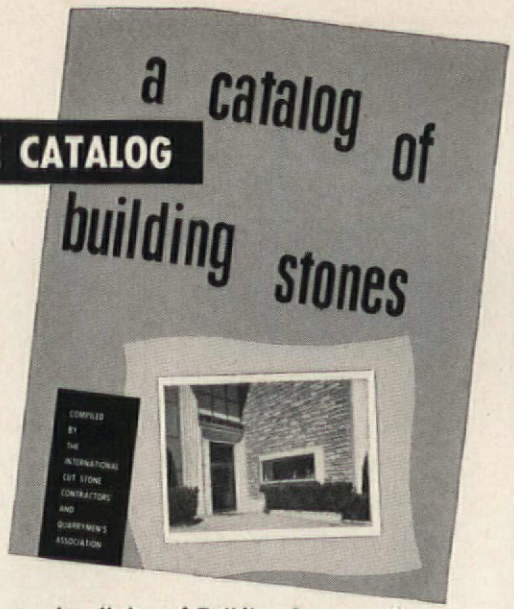

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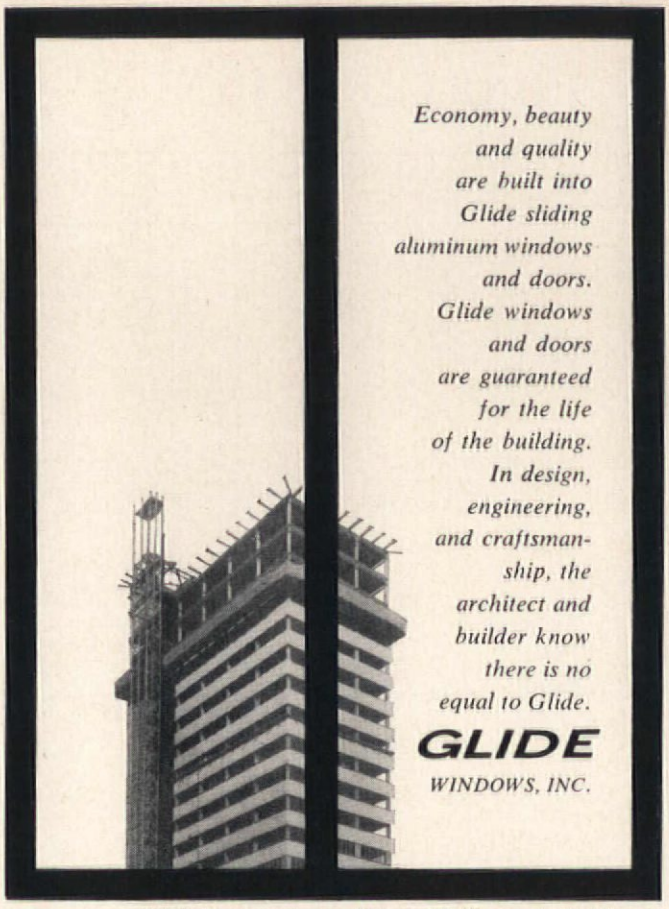

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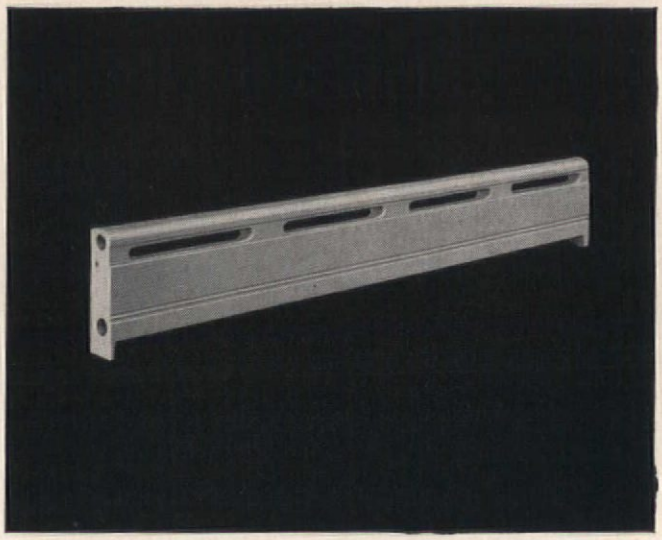

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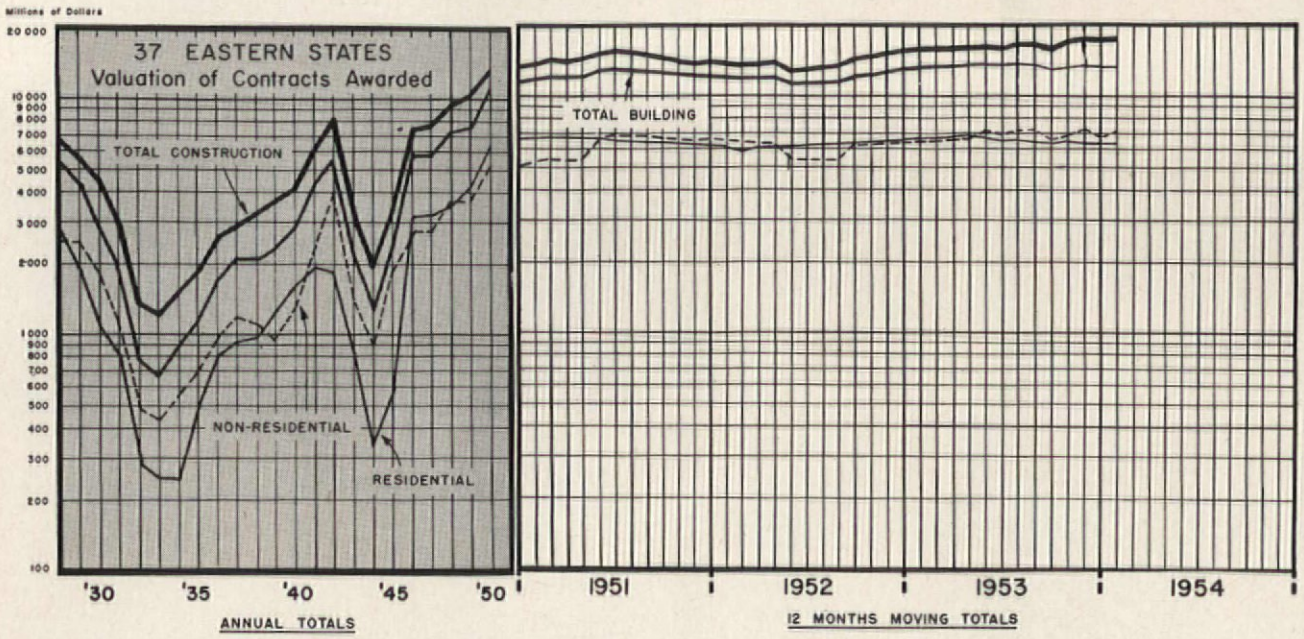


Charts by Dodge Statistical Research Service

FIRST 1954 FIGURES SET ALL-TIME RECORD

VALUATION OF TOTAL CONTRACTS AWARDED in January dropped 11 per cent below the December level as a result of declining activity in nonresidential and heavy engineering construction. All three major construction groups, however, showed dollar volume gains over January 1953: total valuation was up seven per cent, to set a new record for the first month of any year.

Nonresidential awards for January dropped 12 per cent from the December valuation and registered a seven per cent decline in physical volume. As compared with last January, however, dollar volume for the month represents a 16 per cent improvement, and floor area showed a five per cent gain.

Value of residential building in January rose seven per cent above the previous month's figure and one per cent over January 1953. Physical volume for the month registered a three per cent gain over December, but fell six per cent below January a year ago.

Valuation of heavy engineering work for the month declined 34 per cent from the December level, but showed a four per cent gain over last January.

HOSPITAL CONSTRUCTION*

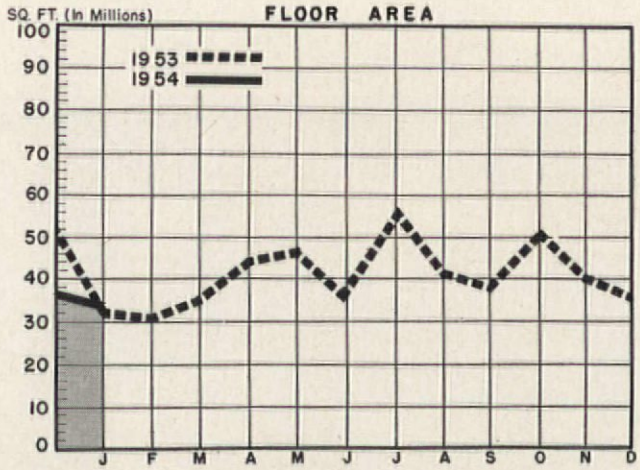
F. W. Dodge Contracts Awarded—37 Eastern States (millions of dollars)

Year	Annual Total	Monthly Average	Year	Annual Total	Monthly Average
1939	72.2	6.0	1950	615.6	51.3
1945	108.7	9.1	1951	550.6	45.9
1949	527.5	44.0	1952	401.5	33.5

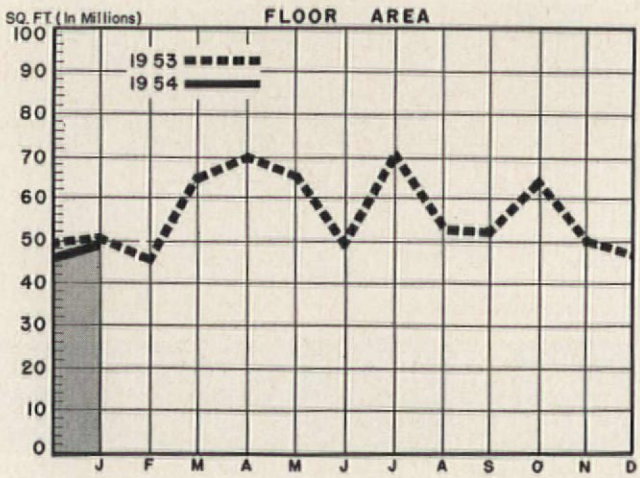
1953 (403.8)			1954
Jan. 34.2	July 28.6		Jan. 37.6
Feb. 17.0	Aug. 55.7		
Mar. 26.2	Sept. 32.3		
Apr. 23.0	Oct. 59.7		
May 23.0	Nov. 37.8		
June 27.6	Dec. 38.6		

*See Building Types Study No. 208, pp. 159–190

NONRESIDENTIAL BUILDING (37 EASTERN STATES)



RESIDENTIAL BUILDING (37 EASTERN STATES)



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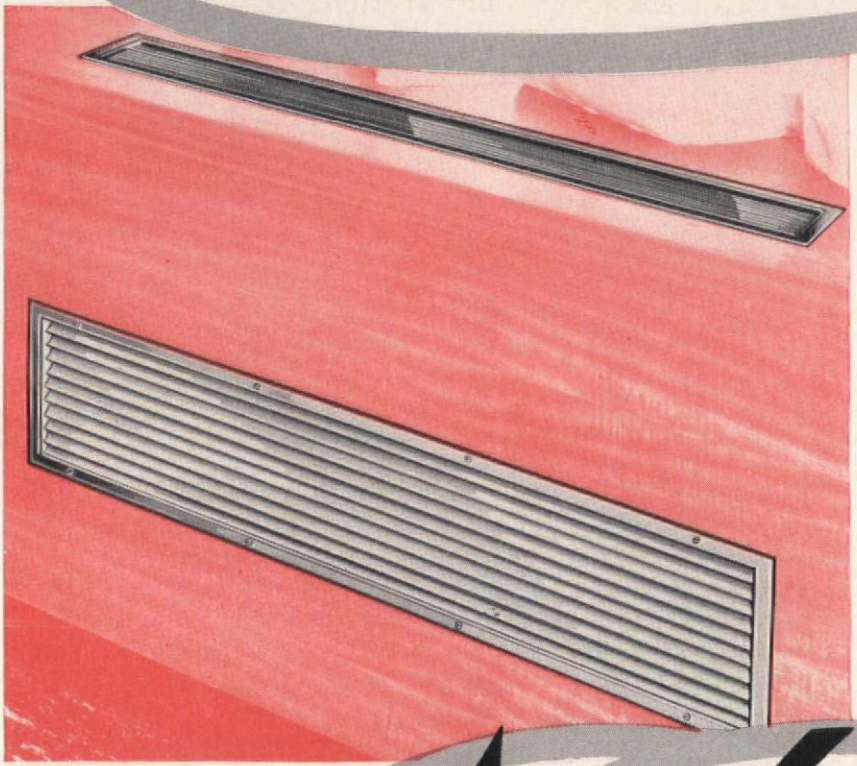

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INDEX TO ADVERTISING

A-IC Acme Industries, Inc. 106
Active Tool & Manufacturing Company 33
A-IC-LC Adam, Frank Electric Co. 81
A Adams & Westlake Co. 213
Advance Transformer Co. 73
Aerofin Corporation 72
A-LC Aetna Steel Products Corporation 134
Air Devices, Inc. 140
A-IC Alan Wood Steel Company 304
A Alberene Stone Corp. of Virginia 331
A Allen, W. D. Mfg. Co. 321
A-LC Alliance-Ware Inc. 301
Aloe, A. S. Co. 344
A Alumiline Corporation 325
A-IC Aluminum Company of America 271
A-LC Aluminum Window Mfrs. Association 28–29
A-IC American Blower Co. 311
A American Brass Company 61
American Gas Association 224–225
A-IC American Hardware Corporation 222–223
A American-Olean Tile Company 291
American Pencil Co. 329
A-LC American Radiator & Standard Sanitary Corp. (Plumbing & Radiator Division) 96–249
A-LC American Zinc Institute 284
Amplex Corporation 300
Architectural Record 244–245
A-IC Arketex Ceramic Corp. 123
A-IC-LC Armstrong Cork Company 78–79
A Arnot Jamestown Corporation 134
Art Metal Company 137
Associated Manufacturers of Lathing and Plastering Materials 2–3
Auth Electric Company, Inc. 39
Avoncraft Division of Avondale Marine Ways, Inc. 87–88

IC Babcock & Wilcox Co. 63
A-IC Bayley, William Company 120
A-IC Benjamin Electric Mfg. Co. 125
A-IC Bethlehem Steel Company 80–275
Bigelow Rugs and Carpets 220–221
Bituminous Coal Institute 50
A-IC-LC Blue Ridge Sales Division 113
Books 285–335–343
A-IC Borg-Warner Corp. 330
Browne-Morse Company 32
A-LC Bruce, E. L. Co. 105
A Brunswick-Balke-Collender Co. 316
Buffalo Forge Company 296
Burnham Corporation 345
A-IC Burt Manufacturing Co. 336
A Byers, A. M. Company 4
A-IC Byrne Doors, Inc. 226

A-LC California Redwood Association 253
A-IC Carey, Philip Mfg. Company 107
A-IC-LC Carrier Corp. 292
Cast Iron Soil Pipe Institute 257
A-IC-LC Ceco Steel Products Corporation 18–19
A-IC-LC Celotex Corporation 128
A Century Lighting, Inc. 326
A Chase Brass & Copper 252
Cipco Co. 138
A-IC Cleaver-Brooks Company, Boiler Division 71
A Concrete Reinforcing Steel Institute 136
A Congoleum-Nairn, Inc. 49
A Connor Engineering Corp. 343
A Corning Glass Works 255
C-O-Two 64
LC Crane Co. 265
Crucible Steel Company of America 51
A Curtis Companies Service Bureau 235
A Cutler Mail Chute Co. 340
A-IC Cyclotherm Corp. Division 126

A Day-Brite Lighting, Inc. 228–229
A-LC Detroit Steel Products Co. 313
A Dicks-Pontius Company 131
A Dodge Cork Company, Inc. 321
A Douglas Fir Plywood Assoc. 335
A Dunham, C. A. Company 339
A Duriron Company, Inc. 305

Eagle Pencil Company 53
A Edwards Company 250–251

Faber, A. W.-Castell Pencil Co., Inc. 266
A Farr Company 332
Federal Seaboard Terra Cotta Corp. 325
A-LC Fiat Metal Manufacturing Co. 230
A Fiske, J. W. Iron Works 344
A Fleet of America, Inc. 272
A-IC-LC Flintkote Company, The 95
A Formica Co. 333
A-IC Frick Company 132

A-LC Gate City Sash & Door Co. 259
A General Bronze Corporation 283
A-IC General Electric Co., Apparatus 110
General Electric Co., Distribution 129
A-LC General Electric Co., Home Bureau 236–237
General Time Corporation 268
A Glide Windows, Inc. 21–345
Globe Company 341
A Glynn-Johnson Corporation 261
A Goodyear Flooring Dept. 27
Governair Corporation 341
A Grant, Pulley & Hardware Co. 314
A-IC Grinnell Company 340
Guth, Edwin F. Company 55

A Haertel, W. J. & Co. 238
A Hall-Mack Company 59
Halstead & Mitchell 124
Hapman-Dutton Company 340
A Hardwood Products Corporation 270
Harvey Aluminum Division 101
A Haws Drinking Faucet Co. 329
Higgins, Inc. 36
A Hillyard Chemical Co. 112
Holophane Company, Inc. 309
A-LC-IC Hope's Windows, Inc. 293
A Horn Division 316
A-LC Hunter Fan & Ventilating Co. 285
Huntington Chair Corp. 310

A-IC Ilg Electric Ventilating Co. 75
Infra Insulation, Inc. 13
A-IC Ingersoll Products Division 330
A-LC Inland Steel Products Company 350
A Insulite Division 40–41
A International Cut Stone Contractors' & Quarrymen's Association 344
International Nickel Co. 54
International Standard Trading Corporation 127
A-IC International Steel Company 280
A Iron Fireman Manufacturing Co. 231
Ironite Company 312

A-LC Jackson & Church Co. 338
A-IC Johns-Manville 299
Johnson Service Company 83
A-IC Josam Manufacturing Co. 130

A Kawneer Co. 68–69–278
A Kayline Company 330
A Kennecott Copper Corp. 252
A-LC Kentile, Inc. 90
A-LC Kewanee-Ross Corp. 92
Kewaunee Mfg. Co. 318
A-IC Kinnear Manufacturing Co. 294
Kohler Co. 339
A-LC Kwikset Sales & Service Company 1

A LCN Closers, Inc. 279
Lawler Automatic Controls, Inc. 325
A-IC-LC Libbey-Owens-Ford Glass Co. 113–297
Linseed Oil Products Co. 344
A-LC Lockwood Hardware Mfg. Co. 111
A-LC Louisville Cement Company 57
A Loxit Systems, Inc. 94
A Lucke, William B., Inc. 327
A-LC Ludman Corporation 98
A-IC Luminous Ceilings Inc. 22–23

A-IC Macomber, Incorporated 108
A-IC Mahon, R. C. Company 47
Malibu Manufacturing Corporation 7
Manufacturers Association Committee 2–3
A Maple Flooring Manufacturers Association 248
A Marble Institute of America 52
A-IC Marlo Coil Company 262
A Marmet Corporation 337
A-IC Master Builders Co. 2nd Cover
A Mastic Tile Corporation of America 93
A Matot, D. A., Inc. 323
McQuay, Inc. 109
A Medart, Fred Products, Inc. 91
Medusa Portland Cement Co. 287
Metropolitan Electric Mfg. Co. 323
A Michaels Art Bronze Co., Inc. 242
Midget Louver Co. 327
A Miller Company 338
A Miller, Herman 140
A-IC Mills Company 216
A Minnesota & Ontario Paper Company 40–41
A-IC Mississippi Glass Company 65
Moore, Goodloe E., Inc. 342
A Moore, P. O., Inc. 337
Morrison Steel Products, Inc. (Roly-Door Div.) 254
A Mosaic Tile Company 239
A-LC Mueller Brass Co. 77

National Clay Pipe Mfrs., Inc. 102
National Electrical Contractors Association 38
A National Radiator Company 234
A National Terrazzo & Mosaic Assoc., Inc. 345
National Tube Division 70
A Nesbitt, John J., Inc. 37
A New Castle Products 340

Ohio Hydrate & Supply Co. 327
A Onan, D. W. & Sons, Inc. 290
A-IC-LC Overhead Door Corporation 67
A Overly Manufacturing Company 319
A-IC-LC Owens-Corning Fiberglas Corporation 232–233

A Patterson-Kelly Co., Inc. 320
Peck & Harvey 331
A Penn Metal Company, Inc. 260
Pick, Albert Co., Inc. 330
A-LC Pittsburgh Plate Glass Co. 74–317
A Pittsburgh Reflector Company 30
A-LC Pittsburgh Steel Products Company 34–35
A-IC Plasteel Products Corporation 227
A Plastics Engineering Co. 334

MANUFACTURERS' PRE-FILED CATALOG

Symbols "A", "IC", and "LC" indicate that catalogs of firms so marked are available in Sweet's Files as follows: (A) Architecture File, 1954 (IC) Industrial Construction File, 1954 (LC) Light Construction File, 1954

Ponderosa Pine Woodwork 264
A Portland Cement Assoc. 295
A Powers Regulator Co. 14–96–97
A Pratt & Lambert, Inc. 214
Puffer-Hubbard Mfg. Co. 332

RLM Standards Institute 341
Radio Corporation of America 324
A-IC-LC Raynor Manufacturing Co. 335
Ready-Power Co. 258
A Republic Steel Corporation 303–307
A-IC-LC Revere Copper & Brass, Inc. 122
Richmond Radiator Company 89
A Rilco Laminated Products, Inc. 328
A Rixson, Oscar C. Company 56
A-IC Robertson, H. H. Company 246–247
A-LC Roddis Plywood Corporation 241
A-LC Rolscreen Company 43
A-IC-LC Ruberoid Co. 142
A-IC Russell-Burdsall & Ward Bolt & Nut Co. 66
A-IC Russell & Erwin Division 222–223
A-IC Rust-Oleum Corporation 263

A St. Charles Manufacturing Company 99
St. Paul & Tacoma Lumber Co. 342
A Sarco Company, Inc. 135
Scott Mitchell House, Inc. 343
A-IC Scott Paper Company 218
A Seaporcel Metals, Inc. 330
Shampaine Company 141
Signal Engineering and Mfg. Co. 331
Sloane-Delaware Superior Floor Products 281
A-IC Sloan Valve Company 4th Cover
A Smith, H. B. Co., Inc. 3rd Cover
A Smithcraft Lighting Division 277
A-IC-LC Sonoco Products Company 298
Sparta-Ceramic Co. 336
Spear Lighting Fixture Mfg. Co. 322
Sperti Faraday, Inc. 48
Square D Company 31
A-LC-IC Standard Dry Wall Products 138
A Stanley Works 243
A-IC Stark Ceramics Inc. 121
A Steel & Tubes Division 307
A Steelbilt, Inc. 17
Stem, Chester B. 8
A-LC Sterling Hardware Mfg. Co. 132
A Stone Council 344
Straus, Nathan-DuParquet Co. 330
Stromberg Time Corporation 268
Structural Clay Products Institute 104
A Summerbell Roof Structures 339
A Surface Combustion Corp. 315
A-IC Sylvania Electric Products, Inc. 288

A-IC Taylor, Halsey W. Co. 334
A Texlite, Inc. 25
A-LC Thrush, H. A. & Company 282
A Tile Council of America 273
A Timber Structures, Inc. 321
A Titus Manufacturing Corp. 347
Todd Shipyards Corporation 323
A-LC Trade-wind Motor Fans 289
A-IC Trane Company 44–45
A-IC-LC Truscon Steel Division 303
A Tuttle & Bailey, Inc. 84

A-LC Union Aluminum Company 267
A United States Bronze Sign Co., Inc. 334
A-IC United States Gypsum 139
United States Motor Corporation 306
A-IC United States Radiator 126
A-IC United States Steel Corp. Subsidiaries 70–76
A Universal Atlas Cement Company 76
A Uvalde Rock Asphalt Co. 133

A Versen Kurt Company 251
A-IC Viking Corporation 274
Vogt, Henry Machine Co. 62
A Vonnegut Hardware Co. 82

A-IC Wakefield Brass, F. W. Co. 86
A Wasco Flashing Co. 58
A Waylite Company 256
Webster Engineering Company 337
A-LC Weis, Henry Mfg. Co., Inc. 276
West Coast Lumbermen's Assn. 60
Western Lock Mfg. Co. 85
Western Pine Association 126
Westinghouse Electric Corp., Appliance 349
A-IC Westinghouse Electric Corp., Apparatus 114 to 119
Wheeler Reflector Co. 329
A Wiggin's, H. B. Sons Co. 323
Wilmot-Castle Co. 100
A-IC Wing, L. J. Mfg. Co. 302
Woodford Hydrant Company 334
A Worthington Corporation 240
A Wright Manufacturing Co. 308

A-IC Young Radiator Company 103

A-IC-LC Zonolite Company 269

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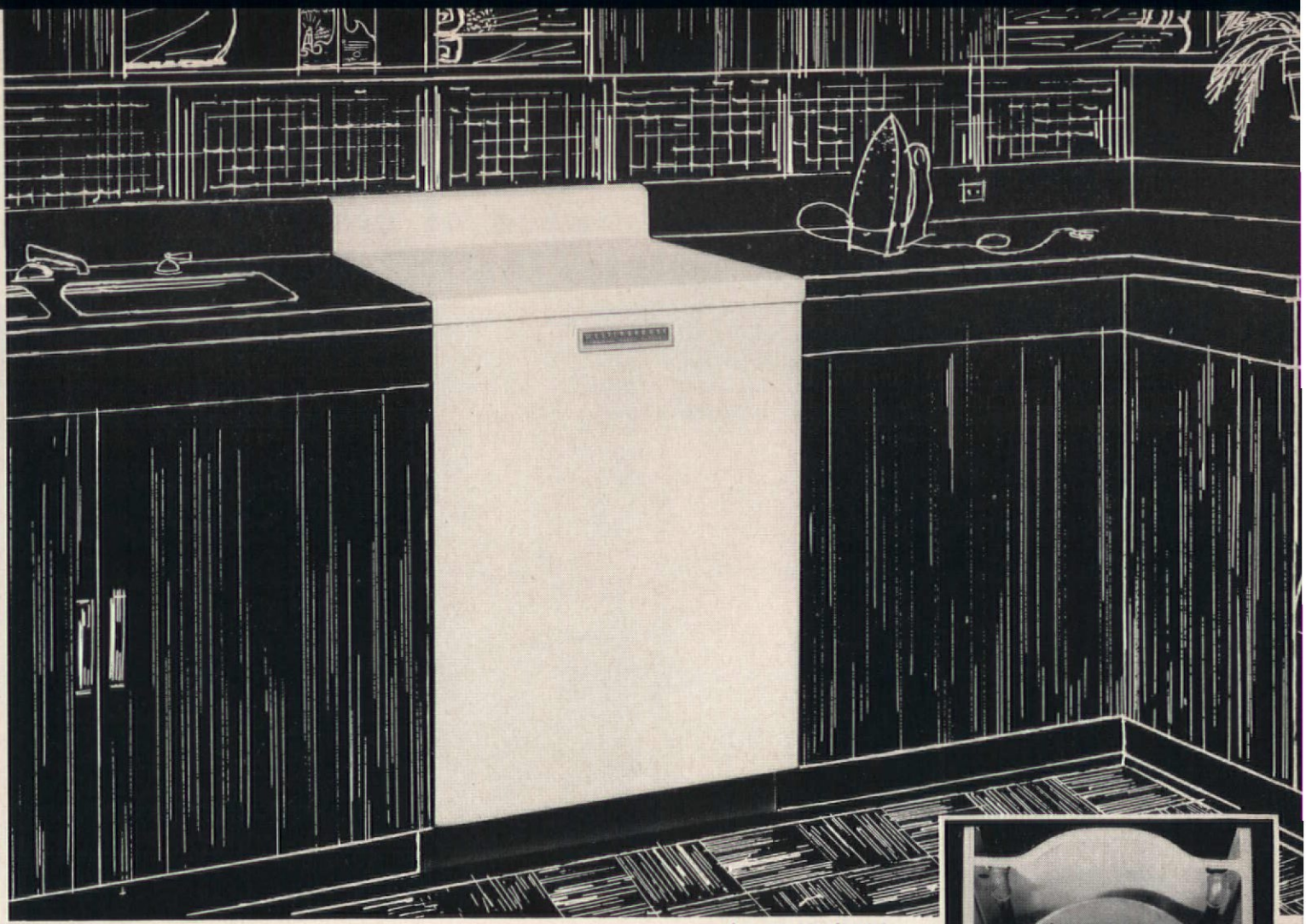

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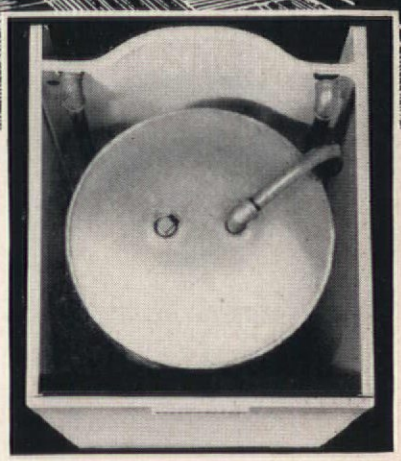
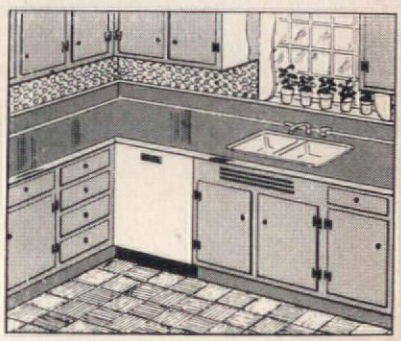
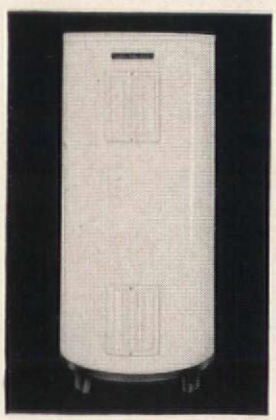


RECESSED CHANNELS in the back allow flush-to-wall installation and still permit pipes to be brought through floor or wall.



UNDER-COUNTER INSTALLATIONS are quickly and easily made. For such applications, any table-top unit can be ordered without top.



WESTINGHOUSE Round Water Heaters come in 10, 30, 40, 52, 66 and 80-gallon capacities, Table-Top models in 30, 40 and 50-gallon sizes.

WESTINGHOUSE ELECTRIC CORPORATION
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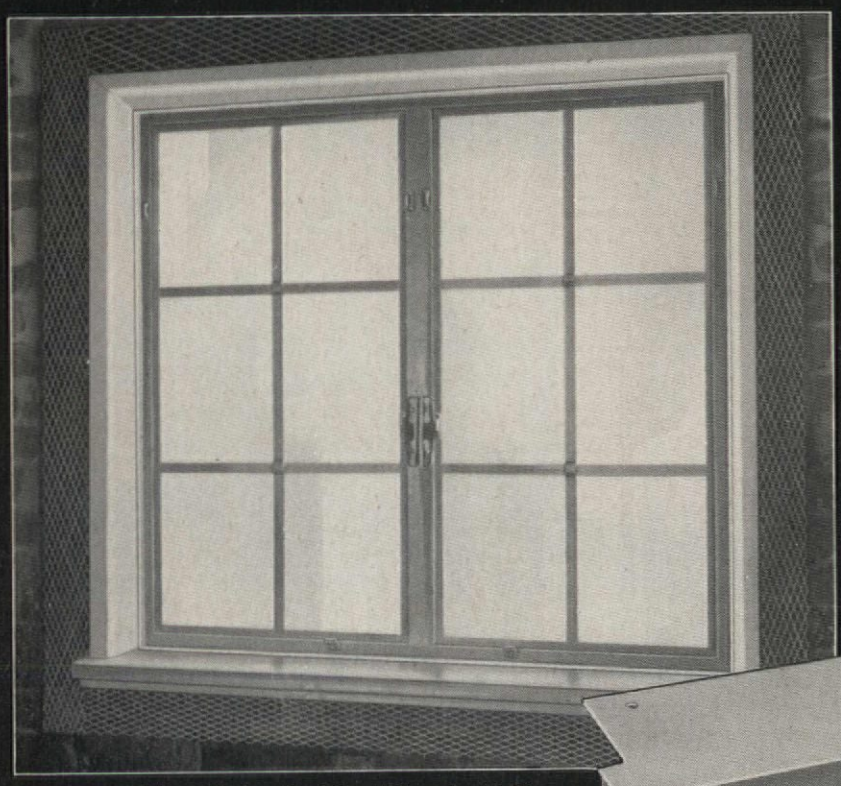
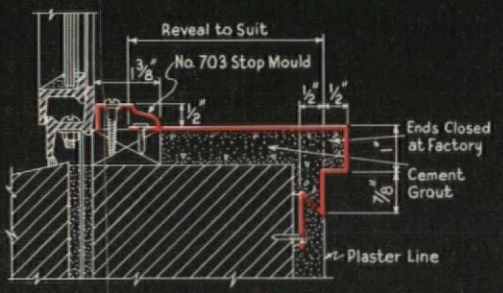
MILCOR* Window Trim

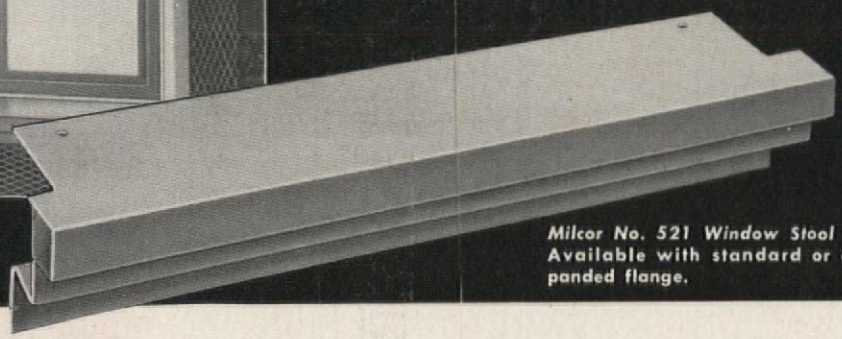
provides the permanence of steel for sanitation, fire-safety, lasting beauty



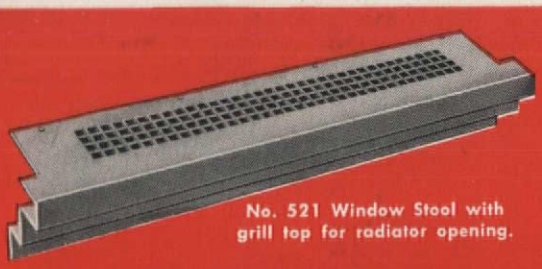
Milcor Window Stool No. 521 used with Window Trim No. 501, mitred and welded to form jambs and head, together with No. 703 stop mould for complete window trim.



Cross-section shows No. 521 installed where flat window stool is desired. Cement grouting is recommended for good construction.



Milcor No. 521 Window Stool — Available with standard or expanded flange.



No. 521 Window Stool with grill top for radiator opening.

No. 501 Window Stool with end fitting

No. 511 Splay Window Stool

A full range of styles, types, and sizes to suit your specific interior design

Milcor has everything you need in steel window stools and metal window trim for schools, institutions or monumental construction.

Because Milcor Window Trim is made of steel, it is wear-resistant—can't warp, rot, shrink, or crack. It is economical to install, easy to clean and maintain, and has a simplicity that lends itself to attractive treatments in modern interior design.

Milcor Window Trim is available either in complete, 4-sided window units or in any combination of component sections. You can choose from many practical designs, sizes and weights, in either plastered-in or removable types.

Look in Sweet's for further information on these handsome window stools — and on corner fittings and other accessories in the Milcor Metal Window Trim line. Or, write for a copy of the Milcor Manual. T-100

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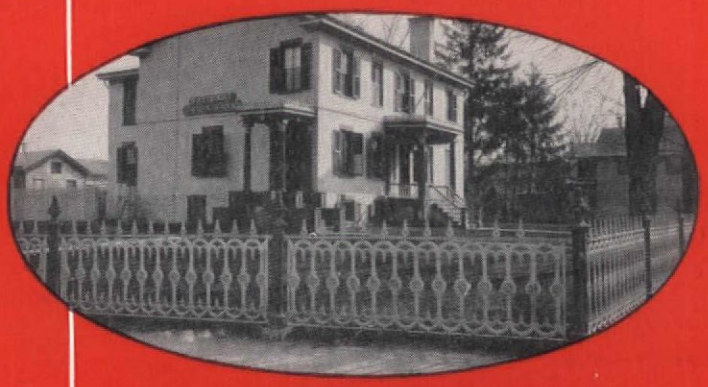
*Reg. U. S. Pat. Off.

What's this about a Bank Fence and a Boiler?



Union Bank of Kinderhook, H. B. Smith fence — 1859

National Union Bank of Kinderhook, same fence — 1954

A true story — with a moral for the boiler specifier

Now flourishing as the National Union Bank, the Union Bank of Kinderhook, N. Y., was founded in 1853, the year in which the H. B. Smith Company was established.

Six years later, H. B. Smith journeyed from Westfield to Kinderhook to lay before the Bank Directors a proposal: to furnish an elegant new cast iron fence to enclose the grounds of the banking building. Good salesman as always, H. B. came back with the order and the fence was speedily erected.

Today, visitors to Kinderhook are still impressed with the decorative appearance of this fence. Ninety-four years of constant exposure to all kinds of weather have done little to wear the sturdy gray iron castings from H. B. Smith's foundry.

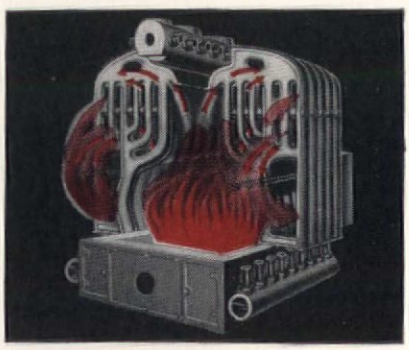
Does this tale hold a moral for the boiler specifier? We think it does!

As used in H. B. Smith boilers, cast iron is an enduring material, highly resistant to corrosive acidic gases, and virtually indestructible except through human neglect or positive mistreatment. It has the qualities of controlled chemical uniformity, adaptability to intricate coring, and rapid and thorough heat absorption.

It is not unusual to find H. B. Smith boilers which have given uninterrupted service for 50 or 60 years and to which sections have been added as the need for greater heating loads has arisen. Thousands have been converted and reconverted to the use of various fuels as economy or supply made one or another more advisable. We know of one installation which has been in continuous use since 1884 — 70 years of service — with the only maintenance cost the replacement of grate bars, doors or other minor trim items.

Your customers are looking to you to provide a boiler with these qualities; you can recommend nothing better than an H. B. Smith.

World's Broadest Line of Cast Iron Boilers for Heating and Domestic Hot Water



Note how more boiler heating surface and longer flue travel exact full benefit from fuel. Tall chimneys and induced draft mechanisms are not necessary with efficient Smith-Mills boilers.

H.B. Smith **CAST IRON BOILERS**

THE H. B. SMITH COMPANY, INC., WESTFIELD, MASSACHUSETTS

Established 1853

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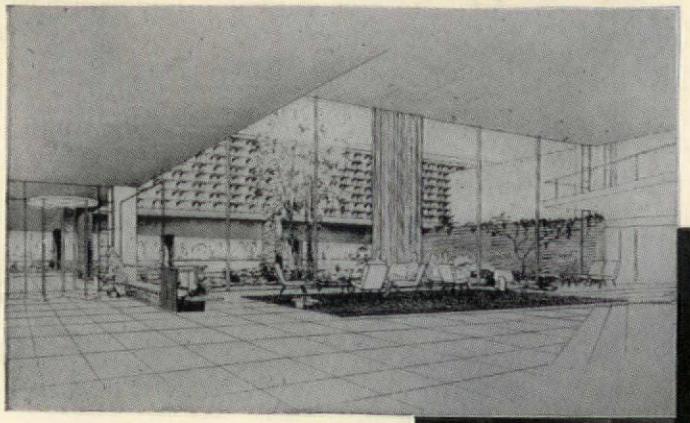
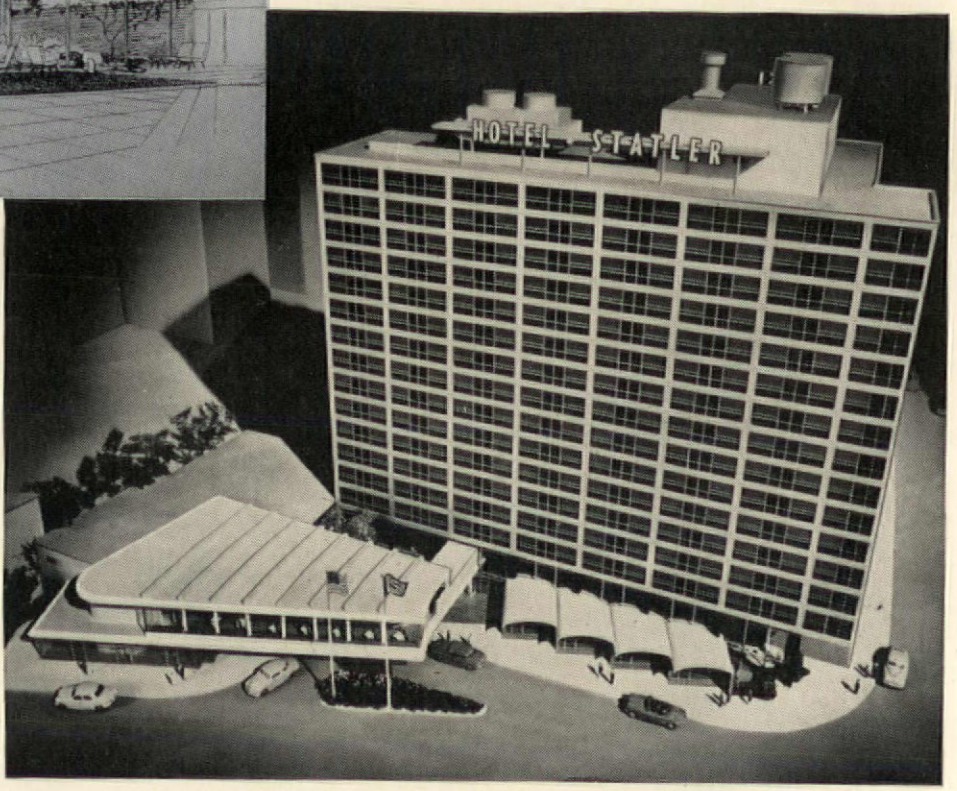


In the exciting new Hartford Statler the Garden Court between lobby and building exterior is open to a sky view



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OUTSTANDING EXAMPLE OF TEAMWORK

THE HOTEL STATLER, Hartford, Conn., newest of the nationally famous hotel chain, is the result of years of architect-owner study and research applied to the creation of a structure that would be an integral part of its operation and not merely a means of housing essential services. It is, in total, a better building at lower costs, and by squeezing out many forms of waste it skillfully provides more than the usual measure of features guests want and appreciate. As in the LOS ANGELES STATLER (and the majority of all other Statler hotels) all of the flush valves in the HARTFORD STATLER bear the famous name SLOAN. Thus Hotels Statler Company followed its policy of using SLOAN *Flush* VALVES for new construction, rehabilitation and replacement—repeated evidence of preference that explains why . . .

more **SLOAN *Flush* VALVES**
are sold than all other makes combined

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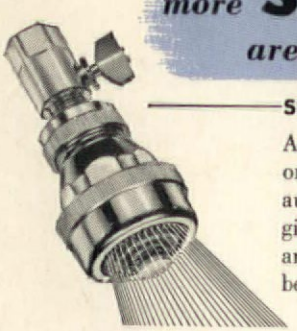

Another achievement in efficiency, endurance and economy is the SLOAN *Act-O-Matic* SHOWER HEAD, which is automatically self-cleaning each time it is used! No clogging. No dripping. Architects specify, and Wholesalers and Master Plumbers recommend the *Act-O-Matic*—the better shower head for better bathing.

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